



INSIDE

NEWWEY SENSATION

WHY McLAREN,
MERC AND
FERRARI SAID
'NO THANKS'
TO DESIGN GURU

COOL BRITANNIA

WHEN 'MIKE
THE BIKE'
CHALLENGED
FOR GLORY



HANGIN' TOUGH

HAAS TEAM
BOSS SHOWS
US THE ROPES

FOUR AND DONE?

As Max Verstappen fights for
a fourth world title...
it could be the last
one for Red Bull



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CONTENTS

DECEMBER 2024

SECTOR 1

- 4 IGNITION**
A masterclass in the wet from Max
- 6 PARADES**
The best from the US and Mexico
- 16 F1 INSIDER**
Title on for Max as Red Bull struggles; Sauber to sign Bortoletto amidst restructuring
- 22 F1 ANALYST**
No GP or engines but it's not all bad news for France
- 24 UNDER THE HOOD**
Why the science of tyres remains such a black art

SECTOR 3

- 84 REPORTS**
From the US, Mexican and Brazilian GPs
- 96 PREVIEWS**
A look ahead to the Las Vegas, Qatar and Abu Dhabi GPs
- 102 PRODUCTS**
Reviews of the best F1 gear
- 106 FLAT CHAT**
McLaren and Norris must focus quickly on 2025

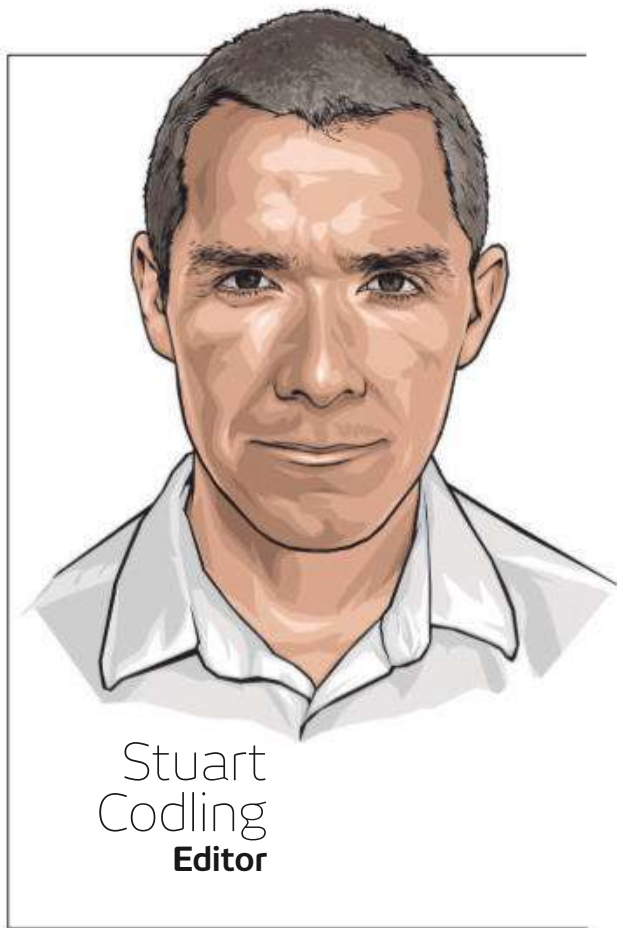


SECTOR 2

- 32 WHO'S NEXT FOR RED BULL?**
Just when it could be most needed, Red Bull's production line of young drivers has faltered
- 40 IN CONVERSATION WITH...**
RB driver Yuki Tsunoda, with a Red Bull test on the horizon
- 42 AYAO KOMATSU**
How Haas's new team principal has engineered the team's revival
- 52 F1 UNCOVERED**
Behind the scenes at RB's Faenza operations centre
- 54 ADRIAN NEWWEY**
Why did he plump for Aston Martin, and can he turn the team into championship contenders?
- 64 10 THINGS I LOVE**
Nico Hülkenberg talks family, F1 onboards, tennis and music
- 66 NOW THAT WAS A CAR**
The Surtees TS14, the car that made 'Big John' call time on F1
- 74 ALTERNATIVE VIEW**
The end is nigh for Renault's once pioneering engine programme
- 76 SHOWCASE**
From closing down to champions: the success of Brawn GP

F1 PRO

- 29 STRAIGHT TALK**
Why Formula 1's massive deal with LVMH is so important
- 30 PRO PROFILE**
Colin Fleming, Chief Marketing Office at ServiceNow



Stuart
Codling
Editor



Wet and wild?

If **Brazil** turns out to have been a pivotal point in the 2024 world championship then I think most observers – partisan fans as well as we neutrals – have cause to rejoice. Indubitably one of the candidates for the drivers' title raced like a champion while the other one didn't.

You may lament Max Verstappen's often prickly off-track demeanour and sometimes questionable etiquette in close combat. You may cavil at his team's tiresome with-us-or-against-us mentality (and, indeed, his team principal's cynical foghorn amplification of absurd conspiracy theories). But you cannot dispute the quality of a wet-weather victory for the ages while setting fastest laps as he pleases. Let's not go down the rabbit hole of trying to rank them in order of quality but Max's Brazil 2024 deserves to be mentioned in the same breath as Senna's Donington 1993 and even, perhaps, Fangio's Nürburgring 1957 or Jackie Stewart's Nürburgring 1968. These are days when worthy champions made their rivals look ordinary.

Still, behind the scenes, all is not well. It's possible you've arrived at this page still spluttering with outrage over our cover treatment. You might not want to believe it but well-sourced word in the paddock – particularly among those well-connected in Dutch circles – indicates that Max's tolerance for everything in F1 which annoys him is starting to run out. As we adumbrate on p16, it's a long list which extends from Red Bull's difficulties in providing him with a consistently competitive car

and the tawdry power struggle still raging at that team's HQ, through to his belief that he's become the FIA's whipping boy over matters from on-track conduct to his choice of words in press conferences.

Not everybody will be happy about events in Brazil. I refer not just to McLaren management and some elements of the fan community but also to the commercial rights holder and the promoters of races which may now become dead rubbers. This issue of *GP Racing* hits the streets ahead of the Las Vegas GP, where Max has a mathematical possibility of getting the championship over the line and rendering the last two parts of the triple-header somewhat less than enthralling.

The warm glow of a fourth consecutive drivers' championship may yet change Verstappen's perspective on his F1 future. Nevertheless Red Bull has wider issues beyond Max management and faltering car performance. As we examine on p32, the organisation's young-driver ladder is missing a few rungs – a situation thrown into stark relief by Sergio Pérez's shambolic recent form. The most compelling potential replacements for Checo lie outside Red Bull's pool – a let-down for a company which has done more than any others to promote young talent in the past quarter-century...

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Contributors



ANDREW BENSON

The BBC's Formula 1 correspondent delves into the whys and wherefores of Adrian Newey's switch to Aston Martin (p54)



ALEX KALINAUCKAS

Alex analyses what's going on with Red Bull's driver programme as the conveyor belt of talent seems to be at a stop at the moment (p32)



DAMIEN SMITH

The TS14 was the last serious throw of the dice for John Surtees as an F1 constructor/owner but, as Damien explains, it didn't pay off (p66)



JAMES ROBERTS

Our former associate editor has been busy this month supplying our race reports (p84-95) and regular Pro Profile (p30)

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Grandstand view of King Carlos

One of the signature features of the Mexican event is the way the podium finishers stop their cars in the Foro Sol stadium section rather than pulling into the pitlane. All the track graphics are set up to provide a strong background and it's easy to get up amongst the crowd and shoot from an elevated perspective.

As the great Ansel Adams once said, photography is all about knowing where to stand. So I positioned myself for where I thought the cars would park up at the end of the race. Actually they stopped much further out so I had to run and dodge a few beer sellers before Carlos emerged from his car and acknowledged the crowd!



Photographer
Sam Bloxham

Where Mexico City, Mexico

When 3.47pm, Sunday
27 October 2024

Details Canon EOS R3
100-500mm lens, 1/1000th @ F7.1





Esses are for sparkling

I noticed in the pictures people were posting from sprint qualifying that a few of the cars were kicking up quite a lot of sparks as they came through the Esses section of the Circuit of The Americas. So I decided to go there for quali on Saturday, knowing they would most likely be doing it again.

As you'd expect from a car with an obviously low ride height and a reputation for bumping and grinding against the track surface, the Mercedes was definitely the 'sparkiest'. I started off with a rear shot then moved round to get them from the front. Sadly by that point Lewis Hamilton had been eliminated but there was one Merc left...



Photographer
Glenn Dunbar

Where Austin, USA

When 5.50pm, Saturday
19 October 2024

Details Canon EOS R5 MkII
500mm lens, 1/2500th @ F8





A new wind in Ferrari's sails

Although there are now three races in the United States this remains one of my favourites because not only is the Circuit of The Americas a great track, it's rewarding to photograph. It often throws up unusual races, too. While I could see from trackside that the Ferrari was quick and looked stable, you would still have expected a Max Verstappen or Lando Norris win... until the first corner.

The big flags in Austin are great photographic sighters for the event, really giving it a sense of place. This one is at the top of the hill outside Turn 1. Add in some glorious late-afternoon sun, a wind and some big Texas clouds and you've got all the elements you need.



Photographer
Steven Tee

Where Austin, USA

When 3.20pm, Saturday
19 October 2024

Details Canon EOS R3
24-70mm lens, 1/16000th @ F5.6





Before the fizzle went to shizzle

OK, so according to Forix the actual number of starts Fernando Alonso had accumulated before the Mexican Grand Prix was 396 rather than 399. Nevertheless, according to Fernando's audit he was reaching the 400 point in Mexico City and who am I to argue? I paint with light, I don't count races...

The team was really energised to celebrate Fernando's milestone, with special decals for the garage floor and a run of pin badges to give to VIPs and hospitality guests. Gathering for a photo was a good excuse to get in early on Sunday and beat the worst of the traffic outside the circuit. Sadly the race itself didn't go well for Fernando but it's still an impressive feat – 21 years on the grid and he's as competitive as ever.



Photographer
Zak Mauger

Where Mexico City, Mexico
When 11.32am, Sunday
27 October 2024

Details Canon EOS R3
16-35mm lens, 1/320th @ F5.6





Sunshine dipping in the Foro Sol

When Mexico came back to the world championship calendar in 2015 after a 23-year absence there was much muttering in the global fan community about the changes to the infamous final turn, the Peraltada. Sadly they were never going to be able to keep it given the absence of run-off.

Now the track's final sector runs through the Foro Sol baseball and concert stadium. While it's not a great sequence of corners, certainly for this generation of cars, it's a marvellous and atmospheric setting, especially as the sun dips over the lip of the roof. The cheers of the crowd even drowned out the editor of this magazine's complaints about the lack of an apostrophe on the 'photographers window' sign...



Photographer
Simon Galloway

Where Mexico City, Mexico
When 4.02pm, Friday
25 October 2024

Details Nikon Z9
14-30mm lens, 1/640th @ F4

WHY IT'S MAX OR BUST FOR RED BULL

01 Max Verstappen's spectacular drive in Brazil – from 17th on the grid to victory – will go down in history not only as one of his most remarkable wins but also as a decisive knock-down for 2024 title rival Lando Norris. With a 62-point lead and three races remaining as this issue of *GP Racing* arrives on the shelves, only something extraordinary can prevent Max securing his fourth consecutive title with Red Bull.

And yet there are reasons to believe this could also turn out to be the last title for the dominant force of recent years. Credible doubts remain over Verstappen's appetite to remain in F1 – and, interlinked with this, over Red Bull's ability to provide him with a competitive platform.

This championship will be remembered as Max's triumph, first and foremost, not Red Bull's, since the RB20 wasn't the fastest car for most of the season. The ten-race winless streak from mid-June to early November serves as strong evidence of just that. It wasn't just Max's brilliant drive in São Paulo that placed the title within his grasp – his hard-fought victories

over Norris at Imola, Canada and Barcelona earlier in the year were just as crucial. At the time, those races appeared to be a continuation of Red Bull's dominance. But in retrospect they look somewhat different: from the Miami round in April, when McLaren introduced its first major upgrade

THIS COULD ALSO TURN OUT TO BE THE LAST TITLE FOR THE DOMINANT FORCE OF RECENT YEARS

package, Verstappen no longer had the fastest car. Had he allowed Lando to win those three races, the championship battle would have taken another path.

McLaren moved ahead of Red Bull in the constructors' championship in Baku and Ferrari followed suit in Mexico. The RB20 is now arguably just the third-fastest car on the grid. It's hard to imagine a scenario in which the Milton Keynes outfit can regain second place, let alone win the title, given that the team has allowed itself to become totally dependent on Max.

Insiders say that having designed the car to suit Verstappen's driving style and his ability to handle an extremely sensitive front end, Red Bull has made it almost undrivable for anyone else – as evinced by Sergio Pérez's season, which he himself has described as "terrible". Coupled with Max's unique ability to

01 FOUR AND DONE? Why Red Bull is facing a win drought



Max moved closer to his fourth successive title, coming from 17th in Brazil (top) to win (above). Further success for Red Bull will be more difficult

mentally destroy his team-mates, finding the ideal number-two driver for the Dutchman has been a challenge for Christian Horner and Helmut Marko (see p32).

Given that Pérez hasn't won a race since last year, reached the podium since April, and is now a distant eighth in the drivers' championship, one might question how he ended up driving one of the best cars on the grid in the first place. However, this not only says something about Pérez – it also

02 SWISS WATCH

Bottas clocks out of Sauber/Audi



PICTURES: STEVEN TEE; ZAK MAUGER; ANDREW FERRARO; JERO TILTON

highlights some of Red Bull's own issues. Notably, in the Covid-affected 2020 season, Pérez scored 125 points in 17 grands prix, just 26 fewer than he has scored in 21 races (plus several sprints) so far this year. And that was with a midfield team.

Taking these statistics into account, it's easy to suggest that Pérez – a fairly capable driver – simply can't handle a car built for Verstappen, or one whose flaws can only be counterbalanced by Max's unique gifts. Having bet the farm on one driver, Red Bull is exposing itself to serious risk. After all, if both drivers had scored at Pérez's level, it would be heading towards fourth in the constructors' championship at best.

It's almost impossible to ignore the reality that Pérez does need to be replaced, and yet there is no clear alternative. The once endless stream of young drivers from Marko's junior programme is drying up, and there's been a reluctance to promote from the Faenza-based 'sister team'. Thus the rush to drop Daniel Ricciardo for Liam Lawson and evaluate him as a Pérez replacement.

As well as being pleased with Lawson's results, Red Bull bosses are said to value his natural ability to cope with pressure. It's a quality that could come in handy if he finds himself sharing a garage with Verstappen, although it's debatable whether it will be enough to make up for his apparent lack of experience.

Even more puzzling are the rumours linking Red Bull with a bid for Franco Colapinto. The Argentinian has impressed in his first few races since replacing Logan Sargeant at Williams, but he has even less F1 experience than Lawson. Nonetheless, Horner has already publicly praised Franco and neither he

nor Williams boss James Vowles are concealing that they are in negotiations. Some rumours have it that Red Bull is prepared to pay as much as \$20 million to buy him out of his contract with Williams.

The wildest theories – probably originating in Argentina, and therefore to be regarded with due scepticism – suggest Horner is considering bringing Colapinto directly to Red Bull Racing. That such an idea is even circulating around the paddock shows just how dire Red Bull's situation is in terms of drivers.

Indeed, this could be seen as yet another example of the team's dependence on Verstappen. Red Bull overlooked the opportunity to sign Carlos Sainz this summer when he became a free agent after Ferrari signed Lewis Hamilton for 2025. Insiders suggest Horner simply didn't want to upset Verstappen's camp by bringing in Max's former Toro Rosso ▶



Constructors' champions in 2023 (above) and 2022 (left), Red Bull will be hard pushed to repeat those successes this season



Christian Horner and the Red Bull hierarchy have some tricky decisions to make for 2025, if the team does drop Sergio Pérez

team-mate. It's well known that their rivalry at the time turned into intra-team conflict, and sources suggest that 'Team Max' wasn't keen on a reunion – despite nearly 10 years having passed.

One undeniable fact remains: Red Bull's only hope of winning races and challenging for titles next year is directly dependent on retaining Verstappen. However, even if Max's flirtation with Toto Wolff and Mercedes is now a thing of the past – both parties admit their paths are unlikely to cross in the near future – there is no guarantee that Verstappen will stick around for long.

He has already said that his current contract could be his last in F1. He's not motivated by beating championship records and would never sacrifice his personal interests for the sake of statistics. It's easy to imagine that if he ever reaches a point where he no longer enjoys F1, no contract would keep him in it for even one more day.

There are plenty of elements within modern F1 that Verstappen openly resents. At the start of the year he managed to stay out of Red Bull's internal feud in which his boss and his father were on opposite sides, but he clearly didn't enjoy fielding the endless questions about it. Red Bull's drop in performance also put him on the defensive and, Max being Max, he drove as he always does – to the limit and often beyond. He met the resulting criticism of his driving etiquette in his characteristic way: abruptly shutting down angles of enquiry and suggesting that he was being victimised because of his nationality.

While it could be argued that the criticism was more about his frequent (and often successful) attempts to drive his rivals off the track, and therefore fair, Max and his entourage are too firmly entrenched in their defensive positions to see this perspective. And they have other reasons to believe he is being singled out: not long after FIA president Mohammed Ben Sulayem complained in an interview about drivers swearing, Verstappen was fined for uttering an everyday profanity during



Liam Lawson did put himself in pole position to replace Sergio Pérez by beating him in both Mexico and Brazil in an inferior car

a press conference in Singapore. When Charles Leclerc did the same in Brazil he was treated more leniently, though there were mitigating circumstances.

Within the online fan community bizarre conspiracy theories purporting to explain Red Bull's apparent drop-off in form post-Miami are rife, suggesting a high-level stitch-up to prevent Max dominating another season. While there is no reason to place credence in them, it's notable that Horner has openly stoked these fringe beliefs – albeit carefully not naming names so as to avoid potential legal action for defamation. It all speaks of a bunker mentality in Milton Keynes.

Add to this the knowledge that Max has never been a big fan of the 2026 rules reset, and the idea that he might leave F1 in favour of his sim racing career (or whatever) in the not-too-distant future doesn't seem too far-fetched.

Either way, next season already promises to be very challenging for Verstappen and Red Bull. Not only does McLaren look stronger on most circuits, but Ferrari, having resolved the issues that slowed it mid-season, now looks a force to be reckoned with as well. Predicting what awaits Red Bull after the regulations change is even more difficult – especially since it will be racing its own engine for the first time. Any misstep in the early days of the new regulation cycle could rule Red Bull not only out of titles, but even race wins.

To win the championship in Las Vegas, Max only needs to finish either ahead of Norris or just behind him – in most cases that will be enough to turn Lando's chances from unrealistic to mathematically impossible. Max's fourth title with Red Bull is now almost a formality. But will it also be the team's last? ►

NEWS IN BRIEF... NEWS IN BRIEF...NEWS IN BRIEF...

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DURACELL IS TO sponsor one of the DRS zones at the upcoming Las Vegas GP. The copper and black colours will be "prominently displayed" throughout the zone on the Koval straight, and is the first bespoke sponsorship of its kind since DRS was first introduced in 2011. The activation will consist of LED panels on a gantry spanning the track, trackside signage and rooftop branding.

PARTNERSHIP

Haas and Toyota Gazoo Racing, the motorsport arm of Toyota, have announced a technical partnership. TGR will provide design, technical and manufacturing services to the F1 team, and Haas will give its expertise and commercial benefits

in return. TGR staff will also be involved in Haas F1 tests.

PENALTY

Robert Shwartzman will have to take a five-place grid penalty in his first GP, should he ever get a race seat. This is after he was penalised for passing under double waved yellows in FP1

in Mexico, when he was driving a Sauber

FINES

F1 power unit manufacturers Honda and Alpine (Renault) have agreed to pay fines for procedural breaches of the FIA's engine cost cap rules. Honda will pay \$600,000 and Alpine \$400,000.



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NO SWISS ROLE FOR BOTTAS

02 Experience is no longer in fashion. Valtteri Bottas is the latest driver with more than a decade of F1 experience to give way to a youngster. The Finn's Sauber seat will be taken by a rising talent from Brazil, Gabriel Bortoleto.

Back in late spring, Bottas claimed he was "99%" sure he would be in F1 in 2025, but none of the plates he and his managers were spinning stayed aloft. His contract with Sauber expires at the end of this season and initially the focus was not on extending it, but on switching to Williams. That door then closed when Carlos Sainz took the seat Valtteri had earmarked. The seats at Haas were already taken by then and Alpine – which had also made a play for Sainz – opted to promote its own junior, Jack Doohan.

That left Sauber as Bottas's only chance to stay on the grid – and initially he wasn't in the frame there, either. According to insiders, former bosses Andreas Seidl and Oliver Hoffmann didn't even enter into negotiations with him, having come up with a shortlist of preferred candidates for what's soon to become Audi. When all of those putative drivers passed, and Seidl and Hoffmann were fired and replaced by Mattia Binotto, it was rumoured that terms had been agreed with Bottas. Insiders claim he even signed the contract in early September, but the team management preferred Bortoleto as a long-term choice and a bump in the road was coming.

It is believed Bortoleto, who won last year's F3 title and is now leading the F2 championship, was actually Binotto's main target. The problem was that he is contracted to McLaren – and Binotto first had to secure his release.

It's understood the new Sauber boss wanted to keep Bottas for at least one more season, giving Bortoleto a year to prepare for F1. McLaren, however, insisted it would release Bortoleto only on the condition that he is guaranteed a place in F1 next season.



After initially feeling confident he would remain in F1, a number of doors closed for Bottas and he will be replaced by Bortoleto at Sauber for 2025

THE TEAM MANAGEMENT PREFERRED BORTOLETO AS A LONG-TERM CHOICE

F1 MASTERMIND

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- Q1** Alex Albon has only led one lap of a world championship race. Which GP was it?
- Q2** How podiums did Toyota manage to claim in its eight seasons as an F1 constructor: 11, 13 or 15?
- Q3** At which race did Valtteri Bottas last score any world championship points?
- Q4** True or false: McLaren never claimed a pole position for a GP at Brands Hatch?
- Q5** What happened in the drivers' championship in 1958, 1961 and 1964 but then didn't happen again until 1976?
- Q6** Who am I? I started 69 GPs from 1997 to 2007 for Benetton, McLaren and Williams, claiming three podiums and one fastest lap.
- Q7** Oliver Bearman has raced with two different race numbers this season. What are they?
- Q8** Of the 10 different team-mates Nico Hülkenberg has raced against, five are still currently racing in Formula 1. Who are they?
- Q9** Who scored the most points in a single season for Jaguar Racing: Eddie Irvine or Mark Webber?
- Q10** Which circuit held the last of its eight world championship GPs in 1983?



1 2020 Turkish GP **2** 13 3 2023 Qatar GP **4** True **5** The championship was settled by a single point **6** Alex Wurz **7** 38 (Ferrari) and 50 (Haas) **8** Sergio Pérez, Carlos Sainz, Lance Stroll, Kevin Magnussen, Oliver Bearman **9** Mark Webber (17 in 2003) **10** Long Beach

PICTURES: SIMON GALLOWAY; MARK SUTTON; SAM BAGNALL; ZAK MAUGER; MOTORSPORT IMAGES ARCHIVE



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THE F1 ANALYST

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PICTURES  motorsport IMAGES

In the factory, technical director Bob Bell and executive engineer Pat Symonds (now *GP Racing's* tech columnist) were aiming to improve the technical issues of the 2003 car which made it tricky to drive consistently over a full race distance. Behind the drivers, the power developed by a revised narrow-angle V10 engine was already proving strong. When the R25 first appeared in February 2005, there was a sense the car looked good; a few weeks later, in Australia, the car took pole position and won the race in the hands of Giancarlo Fisichella, while Alonso went from 13th after a tricky wet session to finish third and begin a sequence of 15 podiums including five wins to earn his first title. It was the first of a duo for Renault as an F1 team.

15 years ago, there was a creative element elsewhere which would ensure further French-powered triumph. Red Bull's Adrian Newey incorporated the double-diffuser aero development into an already rapid car and, 12 months later, Sebastian Vettel claimed his first title revved up by the Renault RS27 V8 motor. Renault could celebrate but by then Enstone was under new ownership and would soon run under the Lotus name with team principal Eric Boullier. Yet success continued through Red Bull for three more years.

Renault's desire for F1 powertrains to more closely reflect road-car trends spurred F1's adoption of hybrid power in 2014, but the link with Red Bull grew strained since performance wasn't at the level of Mercedes and Ferrari. That fracture led to Renault coming back as a team owner, repurchasing the Enstone team at the end of 2015. Rebuilding proved trickier than expected although a change of name to Alpine for 2021 seemed to herald a new era: in Hungary, Esteban Ocon took a win that combined French talent, team ownership and engine production for the first time since Alain Prost won for Renault in 1983.

Sadly that competitiveness has drifted away with only 27 more races due to be powered by Renault as the Viry-Châtillon factory 'pivots' to a new mandate. Does that mean French interest in F1 is vanishing, as Renault boss Luca de Meo claimed in a *L'Equipe* interview? Eric Boullier, involved in organising the French GP last time in 2022, disagrees.

"I think F1 is attractive these days with so many people watching Canal+ TV which is so dedicated to the sport," he says. "There's an interest even though the Renault situation is different to what it was. There are also many requests to be on the calendar, so I understand why an event in France will take a while to happen. But one of the biggest sponsors in F1 is the French company LVMH..."

A new 10-year sponsorship package from a company with F1 links back to 1950 indicates French involvement is as powerful as ever.

WHEN WILL RACING COME HOME TO FRANCE?

A challenging year for the Alpine team has been tough for French connections in Formula 1. Based in the UK yet owned by the Renault Group and with power delivered from the southern side of Paris to provide two French drivers with opportunities to shine, it hasn't delivered results. In a period when the nation that hosted the first motorsport events in the 1890s no longer holds an F1 race, it feels as though there is a gap developing.

Perhaps I'm biased; the first road car I drove as a teenager on the family farm was a Renault 4. I was also taken to Silverstone to watch the 1979 British GP two weeks after Renault had scored its first F1 win at Dijon in France with Jean-Pierre Jabouille. Renault missed out on a second win, but René Arnoux achieved back-to-back podiums with second. The turbo 1.5-litre V6 engine was showing good form after two years of poor reliability and would soon be battling yet failing for titles while inspiring others to follow the same technical theme.

The Renault chassis team based in France shut down at the end of 1985, yet the motors continued



Eric Boullier, a former Renault team principal who latterly worked at the French GP, thinks interest in F1 in France is still strong

and, while the name disappeared from track briefly for a couple of years, Renault returned in 1989 with Williams. Armed with innovative approaches such as pneumatic valves it immediately challenged Honda. Over the next decade, Renault power won six consecutive constructors' titles, mostly through Williams but also with Benetton courtesy of Michael Schumacher's talent and team boss Flavio Briatore's inspiration. Flavio had bought into Ligier to get access to the Renault engine and it worked to yield Benetton's only constructors' title.

That link between Briatore, Renault and the Enstone-based outfit developed in the 2000s with Renault buying the team and reinstalling Flavio. By the time Fernando Alonso was driving for the team in 2003 podiums were becoming regular. The build-up to a key season was in progress.

Ocon's 2021 Hungarian GP win, under the Alpine banner, is the team's recent highpoint



All of Sebastian Vettel's four titles from 2010-2013 were powered by Renault engines



2005 and 2006 were undoubtedly Renault's best and most productive seasons as a full works organisation, winning drivers' and constructors' titles in both years



The works team withdrew in 1985 but Renault returned in 1989 as an engine supplier to great success with Williams



The author was in the crowd at Silverstone to see Jean-Pierre Jabouille in the 1979 British GP, two years on from the team's F1 debut and two weeks after its first victory



Success as an engine manufacturer in the 1990s also spread to Benetton and Michael Schumacher in 1994



UNDER THE HOOD

PAT SYMONDS

PICTURES  **motorsport** IMAGES

complicated material that behaves very differently at different temperatures and different excitation frequencies. It's termed a visco-elastic material because it neither displays a simple stress/strain relationship like a suspension spring, nor is the relationship purely viscous like a suspension damper. A spring produces a restoring force which is proportional to its displacement, a damper one which is proportional to its velocity or how rapidly you compress it. Rubber lies in between in that it responds to both displacement and velocity and, just like a suspension damper, it loses energy by heating up. So as the tyre is deformed by cornering, braking or traction, as well as some deformation on the straights, it heats up. It's also subjected to

heating from the brakes but, conversely, the portion not in contact with the road will be cooled by the rush of air over it.

There are two mechanisms of grip which go under some different names. The first

GET A GRIP: THE SCIENCE OF HOT RUBBER

At a macro level the change in competitiveness this season has been obvious. From early domination, Red Bull found itself regularly challenged by McLaren with Ferrari always there or thereabouts. Mercedes too built on its ever-increasing competitiveness, at times being the class of the field.

However, taking a more microscopic view there are considerable swings from day to day and even from session to session. It appears that this is more prevalent this season than ever before – so what could be causing these apparent inconsistencies?

Of course, the closeness of the field perhaps amplifies the effect. A few years ago a couple of tenths cost very few grid positions – today it can be catastrophic. Nevertheless, there are some factors that can play a part. For example, if a car has poor aerodynamic yaw sensitivity it might show well in a windless morning practice but lose relative performance during a gusty qualifying session. Setup also seems to be more critical on the current cars but the most dominant factor, and



Blistering occurs when the bulk temperature of the tyre is too high, and is a different phenomenon to graining

the one you hear drivers mention more than any other, is tyre temperature.

So, let's examine why this appears to be such a problem. To do so we need to understand how a tyre generates grip and what factors affect that grip, but firstly let's answer the obvious question: how important is grip? At an average circuit, a 1% loss of tyre grip loses around 0.3 seconds of lap time – roughly equivalent to carrying 10kg of extra fuel or losing around 10 points of downforce. This shows the significance.

A tyre is a complex mechanical and chemical amalgam. The all-important rubber is a

and most important is generally known as hysteretic grip. This is the grip which occurs as the tyre deforms into the roughness of the small stones that form the aggregate of the track. The depth of deformation and therefore the mechanical grip is a function of temperature. If the tyre is too cold, it will not deform into the track surface; too hot and it will not retain enough mechanical strength to provide grip.

The second mechanism is adhesive grip. This is the molecular attraction of the rubber to the smoother surface on the top of the aggregate. It's a much smaller contributor to the grip but can still be significant on smooth tracks. As a generalisation, the ideal temperature for hysteretic grip is slightly lower than that for adhesive grip. ►

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Lock-ups can damage a tyre by causing a vibration but they also contribute to higher surface temperatures of the rubber



Worn intermediates are often seen when cars stay out too long and the tyres can't handle both the temperature and excessive sliding



Outer tyre temperatures can be measured by Pirelli technicians and the inner liner with devices mounted on the tyre pressure sensors

Determining the ideal temperature for the tyre is complex and depends on the roughness of the track and the slip velocity of the tyre over the surface. These factors have to be computed and put together for both types of grip in what's known as a master curve. This is a plot of grip against temperature for a particular condition and rubber compound. Typically, we may see from this that peak grip occurs at around 105°C with our 1% loss occurring below 100°C and above 115°C. This is a narrow temperature window and explains why performance can be lost so easily.

Unfortunately it's not as simple as that. In order to determine the master curve accurately one needs access to the mechanical properties of the rubber, something no tyre manufacturer will share. The engineers therefore have to make some estimates. Further to this we need to decide what we mean by temperature. Rubber is a pretty good insulator. Its conductivity is about 1,500 times less than that of aluminium and only five times more than a

Styrofoam coffee cup. The heat is generated in the contact patch, and it's the temperature of the bulk of the rubber that determines its properties.

Unfortunately, we can only measure the outer surface temperature through remote infra-red devices and the temperature of the inner liner through similar devices mounted on the tyre pressure sensors. We therefore have to estimate the bulk temperature, which lies somewhere between our two measurements. We would like the tyre to be at a relatively uniform temperature. A particular killer for performance is high surface temperatures with low bulk temperatures. This occurs through excessive sliding, wheelspin, and, of course, locally through brake lock-ups.

HEAT IS GENERATED IN THE CONTACT PATCH, AND IT'S THE TEMPERATURE OF THE BULK OF THE RUBBER THAT DETERMINES ITS PROPERTIES

A word should also be said about graining and blistering. Graining occurs when the tyre is loaded at too low a temperature, in other words when it is relatively stiff, and is a shear failure of the surface leading to rolling of the tread surface and very low grip. Blistering occurs when the bulk temperature is too high, and the embedded gases expand and escape by rupturing the tyre surface.

This is a very short account of an incredibly complex system – probably one of the least well-understood in race engineering but one critical to performance. This explains the attention drivers pay to getting their tyres in the right window to start their qualifying lap and possibly why the results aren't always as expected.

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STRAIGHT TALK

MARK GALLAGHER

X @_markgallagher

PICTURES 

sign of LVMH's confidence in both itself and Liberty's plans for F1 that such an agreement can be countenanced.

The LVMH Group was born from the merger in 1987 of the Louis Vuitton fashion house and Moët Hennessy wines and spirits business. While F1's announcement of the deal revealed it would commence next season, when the championship celebrates its 75th anniversary, its new partner is used to rather more impressive milestones.

The Moët & Chandon champagne house started life in 1743, Hennessy's cognac distillery was founded by an Irish soldier in 1765, and Louis Vuitton is a relatively young arrival having established his luxury luggage label in 1854.

Today the Group is headed by founder and CEO Bernard Arnault, the 75-year-old French entrepreneur who, depending on share values, dices with Tesla's Elon Musk and Amazon's Jeff Bezos for the title of the world's richest person.

It was he, together with his 28-year-old son Frédéric, who was photographed at the announcement of the deal with F1's CEO Stefano Domenicali and Liberty Media's President and CEO Greg Maffei.

Frédéric was made CEO of LVMH Watches in January, the division already known to F1

F1'S BIGGEST DEAL YET

Back in 2019, two full years after Liberty Media acquired Formula 1, I received a call from a New York-based investment analyst asking if I thought the sport's new owners stood a chance of growing the number of official sponsors of the world championship. Bernie Ecclestone had not fully exploited the opportunity, yet Liberty were making positive noises about the prospects for strong growth in that area.

"Give it time," I said, pointing out that Liberty was rather busy with more pressing matters. This included finalising a new Concorde Agreement with the teams and developing a financial model for the sport that worked for all the key stakeholders.

Much has happened in the five years since, the new Concorde Agreement being signed in 2020 and quickly followed by the introduction of the budget cap just a few months later. Notwithstanding the effects of the global pandemic, now a fading memory but at the time a potentially existential crisis, F1's popularity has soared, revenues have surged and, with that, the values of both the teams and the Formula One Group.

The cherry on Liberty's cake, coming in the final



Moët was a previous supplier to F1 (above). The deal with Bernard Arnault (right) and LVMH will see it return

quarter of 2024, is unquestionably the 10-year agreement which Formula 1 has signed with the LVMH Group, the Eurozone's largest company whose market value reached the heady heights of £400billion in early 2023.

The deal, the financial details of which are known only to people inside the LVMH and Formula One Groups, is significant in both scale and term. A decade is a long time. In a world where most companies struggle with a three-year plan and five-year targets feel remote, it's a sure



through the TAG Heuer and Hublot brands.

The wider Group includes far more than the Louis Vuitton, Moët and Hennessy brands, of course. So the next time you come across advertising for Tiffany, Bulgari and Dior, or shop at Sephora or Marc Jacobs, just remember that all of them come under the umbrella of F1's new partnership.

Messaging contacts at Moët Hennessy and TAG Heuer, it's clear the new deal has created a buzz across the LVMH Group. It also happens to be the 25th commercial partner for F1, underscoring the progress made by Liberty since 2017.

THIS MONTH

Colin Fleming

Chief Marketing Officer, ServiceNow

Once a member of the Red Bull Junior Team, Colin Fleming moved from racing to marketing, returning to his home in Silicon Valley, California. Now serving as the chief marketing officer at software company ServiceNow, his racing background gives him a unique insight into how his firm helps transform the digital operations of Aston Martin in F1



2024

Chief Marketing Officer, ServiceNow

2022-2024

Executive Vice President, Global Marketing, Salesforce

2019-2021

Senior Vice President, Global Brand Marketing, Salesforce

2017-2018

Senior Vice President, Chief Creative Officer, Salesforce

2011-2016

Senior Director, Product Marketing, Salesforce

2007-2010

Head of Marketing, eSoles Custom Footbeds

2005-2006

Driver, World Series by Renault 3.5, Atlantic Championship

2004

Driver, European Formula Renault, German Formula Renault

2003

Driver, Barber Dodge Pro Series

GP Racing: You've had a long association with motorsport, including a stint in Red Bull's young driver programme. How did that journey begin?

Colin Fleming: My father runs Fleming Racing Engines, building power units for go-karts. Naturally, I was around the sport and started to race from the age of eight. After winning national titles I moved to Italy and raced for a factory team. That's when [Red Bull driver advisor] Helmut Marko picked me up. I was about 18 and joined other Red Bull juniors at that time such as Scott Speed, Sebastian Vettel and Daniil Kvyat. I raced in World Series by Renault, and one day got an email from Helmut and that was it. So I went back to the USA and raised almost \$20m in personal sponsorship to carry on. But I realised I was fortunate to get that far, but didn't quite make it, so then I transitioned into a marketing career.

GPR: Tell us about your work in Formula 1 and your new role at ServiceNow...

CF: I worked at Salesforce for about 13 years and we did a big partnership with Formula 1 and McLaren too. I led all the brand marketing and activation and then got an opportunity to be the chief marketing officer of ServiceNow – which represents a new era of technology.

ServiceNow started around 20 years ago as a company that helps IT departments manage their workflows across an organisation. It started in IT, but in fact those same problems were directly applicable to customer service, human resources, finances and supply chains. So today we help companies simplify their whole business. We call ourselves the AI platform for business transformation. What does that mean? Well, companies are not only using our applications to run their operations more simply, but they're also building on our platform to make custom experiences and applications to make them bespoke to their businesses.

We got introduced to Aston Martin last year and it's a challenger brand, much like ServiceNow is. We're not a super well-known technology company yet, but have high ambitions and we're investing in the right areas.

INTERVIEW
JAMES
ROBERTS

GPR: Apple founder Steve Jobs famously made simplicity a fundamental principle of his company's business, not only in design, but in decision-making. That's a key aspect of F1, so how does ServiceNow service the needs of the Aston Martin team?

CF: If you consider the phrase 'digital transformation' and look at what's happened over the past ten years, companies have invested into a lot of technology – the average firm has 289 different applications – and yet it hasn't worked. We come in over the top of all that technology and we simplify the entire experience. If you consider Aston Martin, the work involved is more complex than ever – 24 grands prix, over 800 employees – so just this week we went live with our technology, coinciding with the opening of new buildings at their Technology Campus (AMRTC) and it's amazing to see the team fully deploy ServiceNow.

GPR: What are the future plans for ServiceNow?

CF: We've been in the AI space for ten years now and are one of the top-three companies in artificial intelligence. We're nearly a \$200bn market cap company and the darling of enterprise software right now. You see a lot of companies saying there're doing AI, but they have no successful customers. We do – and that includes Aston Martin. This is the first year of our partnership. We have some modest branding on the car, but we're the largest software company you've never heard of; we're the third largest software company in the world but you would never know it, so I've been brought on board to accelerate that.

What I love about this industry is that it's evolving so fast. Just in the last week we've introduced autonomous AI agents working on your behalf in customer service and HR, finances and IT, with human intervention and oversight. Extrapolate that out to Aston Martin – take the 800 employees at the AMRTC – when you think of a modern F1 setting, how can generative AI and autonomous agents help? It means if you can help take the mundane aspects out of work it allows people to focus on the high-profile, high-impact work that enables Aston Martin employees to fight for that last tenth of a second instead.



FOUR AND DONE?





WORDS ALEX KALINAUCKAS
PICTURES RED BULL, MOTORSPORT IMAGES

Despite investing millions in driving talent for over 20 years, Red Bull has a succession crisis on its hands. Amid questions over **Max Verstappen's** willingness to stay, Red Bull leaders **Christian Horner** and **Helmut Marko** seem hell bent on endlessly contradicting each other in public over issues such as the firing of Daniel Ricciardo, the peculiar non-firing of Sergio Pérez, the non-promotion of Yuki Tsunoda, and the prospect of having to look outside the pool for the team's next generation of contenders. What's going on?

“I THINK HELMUT HAS JUST SIGNED HIS FIRST NINE-YEAR OLD”

Christian Horner revealed something new about Red Bull's much vaunted junior team at the 2024 Mexican Grand Prix. The scheme – Formula 1's most comprehensive, albeit far from universally appreciated – is undergoing a redevelopment, or at least an urgent restock as ‘driver advisor’ Helmut Marko goes wild in the aisles. That it needs to after committing vast capital sums since 2001 highlights a certain rot setting in.

You could argue the decline began some time ago. Red Bull's top squad has been fielding a driver who had already made 191 grand prix starts when he joined for 2021. But these days, no matter how long Red Bull says he's contracted to race alongside Max Verstappen, Sergio Pérez is really on a perennial notice period. Yet no driver has graduated from the ‘junior’ RB squad since it was known as Toro Rosso back in 2019. The AlphaTauri era passed in a swish without any of its drivers getting a look in at Red Bull Racing – indeed, Pierre Gasly was deemed unworthy of a second chance and released into Alpine's hands.

In 2024, the Red Bull driver line-up across its two teams has been a seemingly never-ending soap opera, with five principal characters. Negatively fielding the mainest of main-character energy is Verstappen, who wasted no time in chucking his team under the bus when it lost its way on development with the RB20 and did little to stop speculation he might seek an early exit from

his contract, which runs until the end of 2028. That Red Bull cannot keep him happy even on the way towards what still seems a certain fourth straight world title speaks volumes to his power.

The team is also haemorrhaging staff in the aftermath of Horner's behaviour scandal and the resulting Red Bull management war – Adrian Newey to Aston Martin and Jonathan Wheatley to Sauber/Audi are the headliners. But Red Bull's other drivers haven't provided comforting results.

Horner claimed Pérez had "started the season in the best possible way" while Red Bull was still dominating and felt then "it's his seat to lose [for 2025 onwards]" as "he's very popular in the team". Speaking at his home grand prix recently, Pérez himself succinctly described events since then: a "terrible season". At the time of writing, before the Brazilian GP, Pérez is languishing seven places and 212 points behind Verstappen in the drivers' championship.

At RB, Daniel Ricciardo made a bafflingly low-key exit from his seat after the Singapore GP. Ricciardo had come into the season with a real shot at toppling Pérez and returning like the prodigal son. Instead, like Nyck de Vries, the driver he replaced last season, he was ignominiously dismissed between races. The timing of his departure indicated the extent to which Red Bull's leaders aren't on the same page, since Horner revealed that Marko had wanted to drop Daniel three months earlier.

In the other VCARB 01, Yuki Tsunoda has fared better – but with few scene-stealing results. And since Liam Lawson came in for Ricciardo, a clearly discombobulated Tsunoda has made several high-profile blunders – including a shunt in Mexico qualifying which denied both RBs a shot at what they thought was a certain progression to Q3.

Lawson has made quite the entrance, irking Fernando Alonso in Austin and colliding with Pérez next time out. He boldly gave the home hero the finger later in the Mexican race. "I don't think that's what Helmut likes," he said by way of apology, but Marko was moved to say "if it had been someone else" then Lawson's aggression would have been appreciated. Fire is a key trait of any successful Red Bull driver, after all...

TROUBLE AT THE TOP

Red Bull magnate Dietrich Mateschitz's death in 2022 precipitated a power struggle over the company's F1 operations, the ugliness of which was exposed when Horner's alleged harassment of a female employee was weaponised earlier this year. Apparent tensions between Horner and Marko have cooled of late, but the disagreement



Losing long-term Red Bullers Newey (above) and Wheatley (right) hasn't helped the team this season

In Mexico Liam Lawson battles with Sergio Pérez, the man he hopes to replace at Red Bull. It was a feisty affair...





Helmut Marko is Red Bull's young driver programme but the Austrian's production line of talent is wobbling of late

between the two men is central to the current dysfunction of Red Bull's junior programme. Whether the topic of conversation is the timing of Ricciardo's removal, Pérez's contract renewal, who within the Red Bull Junior Team is ripe for promotion, or which outside candidates might be in the frame, Horner and Marko seem to revel in publicly contradicting each other.

MARKO HAS BEEN THE CENTRAL FIGURE FOR RED BULL'S JUNIOR DRIVER DEVELOPMENT FOR ITS ENTIRE 23-YEAR EXISTENCE AND BEYOND (SEE P38). BUT, AS EVIDENCED BY PÉREZ'S HIRING AND CONTINUED EMPLOYMENT ALONGSIDE VERSTAPPEN, HIS HITS HAVE BEEN FAR FEWER OF LATE.

The word "scattergun" has been used in the paddock regarding his signings lower down the junior programme's ranks these days

(and could account for the sardonic tone of Horner's comment about signing a nine-year old). At the same time, Marko deserves much credit for making talent development a central part of how Red Bull has gone about its racing; without the energy drinks giant's resources many of the drivers presently on the grid (and, if you include Jack Doohan, arriving shortly) wouldn't have got there.

But it seems that even if Red Bull does finally ditch Pérez and open a spot in its ranks once again, there are two competing approaches on how to solve this issue. Again, Horner and Marko are seemingly pitted against each other.

At the Singapore GP, Horner pointed out how Mercedes' George Russell "is out of contract at the end of the next year" and "it would be foolish not to take that into consideration", since "we're not afraid to go out of the [Red Bull junior driver] pool".

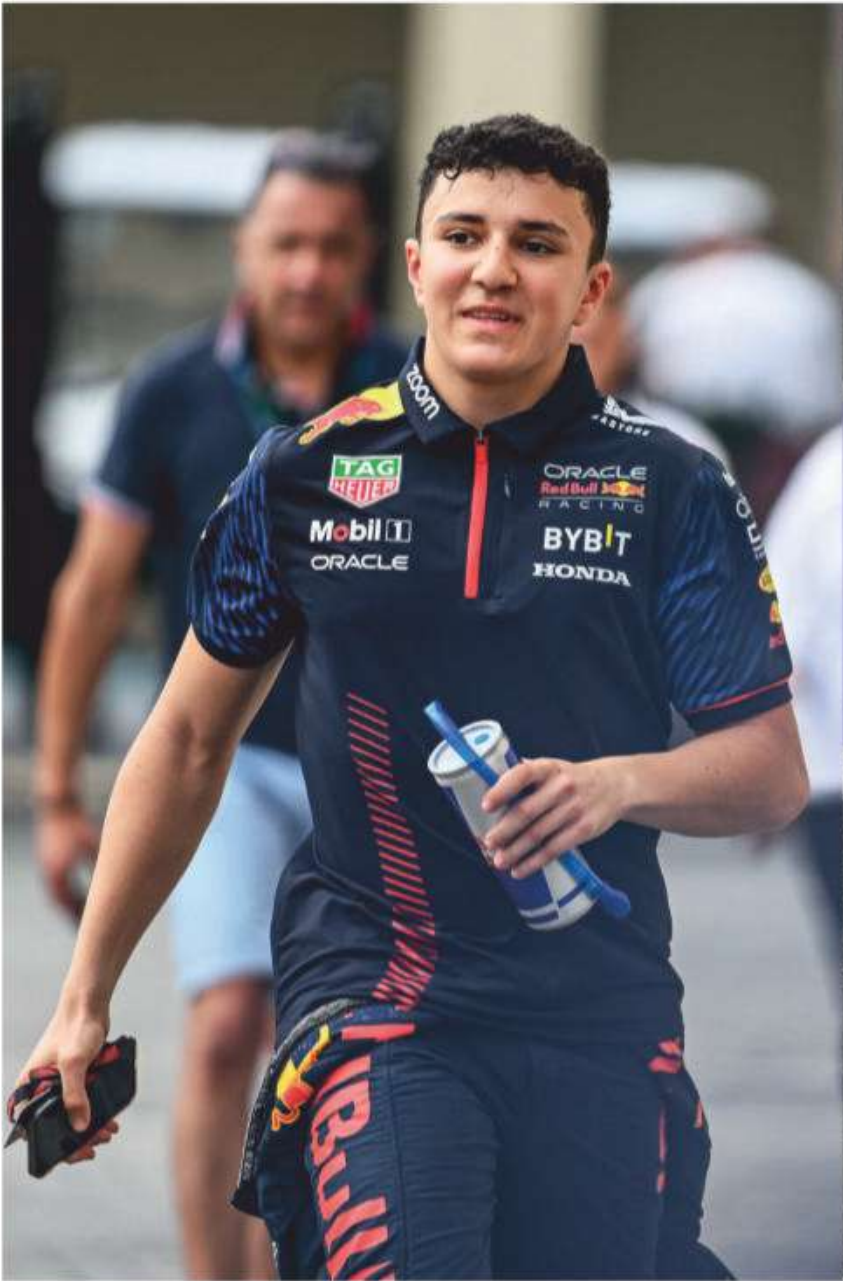
Naturally Mercedes boss Toto Wolff, a long-time Horner adversary, declaimed this as "stirring shit up". But Marko's "Russell is Mercedes-Benz-affiliated and now we are focusing on our juniors" comment was a more ▶





Franco Colapinto has impressed since joining Williams, Without a drive for 2025 he may yet make his way into the Red Bull fold

Isack Hadjar has already driven this year's Red Bull, and is battling for the F2 title, but it seems unlikely he will be shifted into F1





Marko's comments about Russell or Piastri (above) for '26 have been given short shrift. Pérez (below) seems on his way out



meaningful shooting down of the idea.

A much more likely outside hire for 2025 is Franco Colapinto. The Argentine, a product of the Williams young driver programme, has taken just five races to pass the number of points the man he replaced, Logan Sargeant, amassed in 36 GPs. Colapinto has been heavily linked with a move into the Red Bull fold for next year and it is known that Red Bull has been negotiating with Williams to make it happen. As a bonus, Colapinto's profile in his home country has opened the tap for several lucrative sponsorship deals already, which would ameliorate the loss of Pérez's Latin American backers.

Tsunoda has Honda's support but this is a diminishing factor since the Japanese company is moving to Aston Martin in 2026. Red Bull's leaders also have doubts over whether his mindset is robust enough to handle being Verstappen's team-mate, and fear he may implode like Gasly, Alex Albon and Daniil Kvyat before him.

THE DOOR IS HADJAR

The presence of these outside candidates in the conversation highlights the stuttering nature of Red Bull's junior production line. But it does currently have five drivers racing on the F1

support bill in Formula 2 and Formula 3, and three more in Formula Regional and Formula 4.

Of these, Isack Hadjar is currently fighting for the F2 crown – around that championship's ever frustrating late-season hiatus. This has been a problem for many juniors trying to achieve promotion, since their final championship positions – and, therefore, superlicence eligibility – aren't known until nearly the end of the calendar year. This is well past the point most F1 driver line-ups have been set.

It has been suggested to *GP Racing* that Hadjar has little chance of an F1 step with Red Bull regardless of his F2 outcome. Meanwhile, his fellow F2 Red Bull Junior Team members Pepe Marti and Oliver Goethe currently lack the results momentum usually expected. Likewise Ayumu Iwasa – who is these days racing in Super Formula and, like Tsunoda, is tied to Honda.

Of Red Bull's two Formula 3 drivers – Arvid Lindblad and Tim Tramnitz – Lindblad is said to currently have the best shot at graduating to F1. But that is surely at least a year away, since he has just been announced as a Campos Racing F2 driver for 2025.

However, there's already a most likely sequence of events if Pérez is indeed ejected come the year's end. This is that Lawson could well replace him alongside Verstappen for 2025 as a true audition to assess if the feisty Kiwi is the

School's out

The Red Bull Junior Team counts a staggering 81 'alumni' drivers from ranks that were first formed back in 2001. It was also interlinked with Helmut Marko's RSM Marko Formula 3000 squad from 1999-2003 – thus there's also a connection with former F1 driver Juan Pablo Montoya. Marko ungraciously said of him earlier this year: "He told me which of our McDonalds' was the best. I didn't even know there were three in Graz!" Red Bull also sponsored Montoya's former F1 team-mate, Kimi Räikkönen, during his World Rally sojourn in 2010-2011.

But the programme is better known for discovering a plethora of driving talent and funding plenty of it along the long ladder to F1. Of the 2025 grid, Jack Doohan, Carlos Sainz, Pierre Gasly, Alex Albon, Yuki Tsunoda and Liam Lawson all enjoyed Red Bull patronage at one stage or another. Special cases for next year are Max Verstappen, who was a member for barely half a year before his 2015 promotion, and Daniel Ricciardo, whose F1 racing career appears over.

The list of alumni who made it to F1 but are now otherwise engaged is also extensive. Of those 13, Vitantonio Liuzzi is most commonly found in the F1 paddock acting as an FIA driver steward, while Christian Klien is often working for Austrian TV. Karun Chandhok is now a respected broadcaster and Oliver Oakes is running the Alpine squad. Scott Speed develops cars for Subaru and Narain Karthikeyan young racing talent for India. Patrick Friesacher stakes a claim to being Red Bull's longest-backed driver as he continues to demo its F1 machines. Sebastian Vettel – its most successful in F1 terms for now – is spending his retirement visiting the Amazon. DJ Jaime Alguersuari is still touring.

Amongst the many Red Bull juniors still racing elsewhere are Formula E champions Sebastien Buemi [still a Red Bull F1 simulator driver] and Jean-Éric Vergne. They also compete in the World Endurance Championship alongside Daniil Kvyat and Brendon Hartley.

Alex Albon



Jack Doohan



Pierre Gasly



Liam Lawson



Carlos Sainz



Yuki Tsunoda



answer to Red Bull's long-term problem of filling its second seat. In case he isn't, with 2026 in mind the team will also court drivers already on the up in F1 – Oscar Piastri's name is regularly mentioned. And that's all with or without Verstappen (see p16).

"The junior programme has been tremendously successful over the years," Horner replied when *GP Racing* asked about its health in Mexico. "We're giving many drivers the opportunity of getting to Formula 1, and even if that's not with Red Bull Racing, they've gone on to have careers in other teams.

"And the programme has changed a little. It was, in previous years, quite top-heavy in talent in Formula 2, Formula 3. That's been inverted now, so we're going further down the chain.


"We've got youngsters in karting, we've got youngsters in the junior formulae, and it's always been a philosophy of Red Bull to invest in young talent. That continues to very much be the case."

This year, Red Bull has relaunched its Red Bull Driver Search initiative, which involved inviting a group of young drivers (including some younger than 15, the lowest age in the current RBJT line-up) to Jerez in August. There it tested their skills in F4 and GP3 cars with the help of the Campos junior single-seater squad. This is akin to the search Red Bull performed around 20 years ago to promote an American driver to F1, which it did with Scott Speed.

"We don't buy stars, we make stars," Marko said – apparently forgetting about the decision to hire Pérez.

RED BULL'S JUNIOR PROMOTIONS JUST HAVEN'T WORKED OUT SINCE VERSTAPPEN EARNED THE ULTIMATE ONE IN GOING FROM TORO ROSSO TO RED BULL RACING IN 23 RACES – IN MANY WAYS BECAUSE HE IS SUCH A DIFFICULT TEAM-MATE.

Verstappen's pounding brilliance has left a succession of team-mates spat out of the Red Bull system, while the junior programme's current weakness means there have been few viable candidates from in-house to replace Pérez. When Red Bull had little opposition, this wasn't enough of a combination to cost it titles and prize money. But when only Verstappen can take a car package to its true heights within a closer pecking order, this is really exposed.

For, as 2024 has shown and with the expected hit coming at the end of the year in prize money millions, the cracks in the foundations of Red Bull's illustrious driver factory are proving to be very costly indeed. 



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FORMULA ONE TEAM

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YUKI TSUNODA

As Red Bull struggles to find the right team-mate for Max Verstappen – or a successor if he leaves at the end of his contract – one racer on its young-driver roster has been consistently putting his hand up for an opportunity to prove himself. Now he’s finally going to drive an RB20 in the Abu Dhabi tyre test

How important is it for you to get an opportunity like the test in the Red Bull car post-Abu Dhabi? Because until now, your contention for a Red Bull Racing seat is based on how you perform in this team [RB]. Do you feel like you need to get in the Red Bull car to show what you can do?

Yeah, it will be a very good opportunity. At least I finally can show a bit of my driving. I think it’s very important. It feels great that finally they’re giving me an opportunity. I don’t know if it still happens or not. I’ve tried to maximise my chances.

How hard have you been pushing for it? Has Honda been pushing for it?

Definitely Honda helped me to push the testing. I’m very appreciative of them. Obviously, I was pushing since the first race as well, even last year. I think I’ve been able to show results, show that I’ve stepped a little bit more compared with last year. And Honda also did a push to Red Bull as well.

They do say “If you don’t ask, you don’t get.”

Well I was asking multiple times and it never happened so...

It’s your fourth season as part of the setup – are you surprised it’s taken this long to get to this point?

If you’d asked that in the second or third year I’d have been very surprised but I’ve kind of got more used to it, how difficult it is to get even a single day testing [the Red Bull car]. Who’s outperforming most of the team-mates

in previous years? But yeah, it’s just something going on in the background that I didn’t know – or, for sure, at the same time, maybe I’ve not really been able to improve as much as they wanted, especially radio communications.

Driving standards became a hot topic after the battle between Lando Norris and Max Verstappen in Austin. Are you hoping for more clarity on what you can and can’t do?

I feel like they are expecting us to drive like a machine, like AI, trying to follow every rule or whatever. In the end, we’re racing, that’s why people watch it. It’s battling between drivers – trying to fight each other with passion, right? And if they remove that, it’s just going to be like AI fighting, like they did in Abu Dhabi [the Autonomous Racing League, held at Yas Marina last April].

I think for sure the FIA has to give a little bit of room, for contact or things that happen which are a little bit naughty, as long as other drivers didn’t lose out. For sure it’s hard, obviously it’s been a topic for many years, but hopefully one day we can be aligned a little bit more closely.

THE AUSTIN PACKAGE WAS REALLY GOOD, IT DEFINITELY MADE THE CAR A STEP BETTER. IT’S WORKING WELL

Do you think the guidelines now, where whoever has the front axle ahead at the apex effectively owns the corner, are better or worse than previous ones about giving space?

Yeah, it’s hard because it depends on how they define that. If I remember correctly, if the car inside or whatever was ahead at the apex, outside car should come back off. Or in the outside car, if he was ahead of the inside car at the apex, he’s the guy who had priority. But in that case, it’s better to just launch it into the apex even if you go off track – try to get ahead, get a priority and make the corner.

So it’s a bit different what we’re trying to achieve in the corner and what they’re thinking. And, yeah, it’s hard to be aligned. I think the most important thing is they should hear more from the experienced driver [steward]. I think they have an experienced driver to kind of advise how the situation is, and that driver should have more rights to say something, to make more decisions.

You weren’t very convinced by the previous floor upgrade on your car in terms of being able to set it up for a broad range of corner speeds. Are you now in a position where the car is where you need it to be?

The Austin package was really good, it definitely made the car a step better. It’s working well through all the corner speed ranges. Like you say, it builds more confidence. We know where we’re lacking, especially the [drag] efficiency of the car which is having an effect on straightline speed, so we have to be conservative on downforce level.



HANGING TOUGH

WORDS STUART CODLING

PORTRAITS MALCOLM GRIFFITHS

His predecessor, **Guenther Steiner**, was famous for fast talking. New Haas team principal **Ayao Komatsu** would rather be known for fast climbing...



“DON’T BE SO ITALIAN!”

With a broad grin and a twinkle in the eye, Haas team principal Ayao Komatsu dismisses *GP Racing’s* suggestion that, since the hour is just past 10am, the cappuccino he’s now sipping would constitute a ghastly breach of national coffee etiquette in the home of the cappuccino, where the froth-topped beverage is considered a breakfast drink only. And he should know, given his team’s close ties with both Ferrari and Dallara.

The general tenor of the salutations pitched in Ayao’s direction upon arrival was ‘long time no see’. He was a twice-a-week man here at Big Rock Bond until his elevation to the job of team principal at Haas, such are the demands of his new role – even though he’s based in the team’s facility in nearby Banbury, whereas his predecessor was US-based. Thus the expedient of taking climbing shoes on

Komatsu gets ready for a grilling at the climbing venue where, until he became team principal at Haas, he was a regular visitor



Komatsu is a study in concentration as he navigates the path to the top of the wall. He’s already moved Haas into a higher position in F1...





Komatsu moved to Renault in 2006 and when that team morphed into Lotus he was promoted to become a race engineer to Vitaly Petrov

the road; there are bouldering facilities within striking distance of most circuits.

BOLD MOVES

Komatsu has often used the adjective ‘lucky’ to describe his career. Inspired by watching Formula 1 on TV at the height of the Prost-Senna rivalry, he left his native Japan at the age of 18 to pursue a career in engineering. Even with the assistance of a government grant, that’s an intrepid decision at such a young age – especially when you don’t speak the language.

“When you look back, you could say it’s quite a big move,” he says. “And it was. But when you’re 18, and you think, ‘OK, this is what I want to do, what do I have to do to get there?’ for me it was just one of those steps of thinking. I needed to move to England. And that was it. I didn’t think about the gravity of it.

“Maybe that’s the beauty of being so young – you don’t fear things that maybe you should, but if you worry about things too much you don’t do it, right? And my parents said, ‘If this is what you want to do, then we’ll support you.’ When I say I was lucky, it’s that at certain points in my life I just bumped into people who helped me take the next step. And those are things you cannot plan or make happen by yourself.”

At Loughborough University he wrote to “50 or 60” companies, including all the F1 teams, for a work placement, receiving rejections or radio silence from all but two, Lotus Engineering and MIRA. Picking Lotus was the first of several inflection points that led him to F1: his boss at Lotus was a keen amateur racer who facilitated hands-on work experience, which led to more ‘spannering’ work in the British Saloon Car Championship when he went back to university. At this level, when there’s only one or two people working on a car, you learn how to interpret

Ayao linked up with Romain Grosjean for the first time at Lotus in 2012 and stayed with the French driver when he moved to Haas for 2016



Japanese fans are renowned for their avid support of F1 but it’s not just the teams and drivers that get banners at Suzuka...

driver comments in the absence of rich data.

It was at Silverstone, while under a car swapping out an anti-roll bar, that he first encountered fellow Japanese Takuma Sato, who was essaying his first races in British F3’s National class ahead of a campaign with Carlin the following season. They became friends and Komatsu was able to dovetail his PhD studies with unpaid work shadowing Carlin’s engineers for a season and a half.

“As long as you’re proactive, getting involved, sometimes things happen,” he says. “Sometimes it doesn’t, but that’s all you can do.

“You’ve got 20 people looking after two cars [in F3], you can do anything you want compared with one or two people doing it part-time. I learned you can have all that equipment but at the end of the day it’s a human being behind it, making decisions. I saw it wasn’t just science and numbers. That was quite an eye-opener as well.”

Sato then came to the rescue while Komatsu was looking for paid work post-PhD. Ayao was mulling over an offer from Kodewa, the German F3 team run by Colin Kolles (later to become Bernie Ecclestone’s eyes and ears on the factory floor at Jordan, Hispania and Caterham in F1) when a more appealing proposition arrived. In 2003 Sato was BAR-Honda’s test driver, later supplanting the underperforming Jacques Villeneuve in a race seat full-time, and he connected Komatsu with Honda Racing Development bigwigs Shoichi Tanaka and Otmar Szafnauer, who offered a position in BAR’s vehicle dynamics group. This was at the peak of the Bridgestone-Michelin tyre war, an era of unrestricted testing and three hours of sleep at night for those charged with performing it.

“Working for a small team, you do everything from washing the wheel rims to looking at data and talking to the drivers,” he says. “That ▶

experience was very helpful because if I'd gone straight from uni to a big team – and I can't remember how many people were at BAR then, but let's say 300 people – if you go straight into that environment you don't get to understand the whole operation. If you have that experience with a smaller organisation you can go into a team where you're in-season testing all the time with a huge budget, and you don't lose sight of what's important. You don't get lost."

CRASH COURSE

Komatsu moved to Renault in 2006 and was ultimately promoted into a race engineer role, working with Vitaly Petrov at first. But it's his relationship with Romain Grosjean which defined the next part of his career. Grosjean, fast but mentally fragile at first, overcame a rocky start to in F1 and would even, in the mid-2010s, be in the frame for a Ferrari drive. Komatsu was with him all the way from 2012 through the move to the then-new Haas team in 2016 to his exit in 2020.

In late 2012 Grosjean achieved pariah status, described by Mark Webber as a "first-lap nutcase" and even receiving a one-race ban for his role in a lap-one shunt at Spa. In the aftermath of that he sought help from a sports psychologist which he credits with turning around his life and career. Komatsu has subsequently revealed that he felt he could have done more to support Grosjean at the time but lacked the necessary life experience.

"I was always interested in the human side of the sport," he says. "In club racing and British F3 there was a lot of talking to the driver, reading between the lines. Then going through intensive testing with people like Taku, Jenson Button, Fernando Alonso, Heikki Kovalainen, I was learning all the time.

"When you go from performance engineer to race engineer, your job is to manage the driver. Yes, I've done the best I could back then but, looking back – I remember talking about this with Romain – if I'd had five more years' experience, been five years older, maybe I'd have done certain things differently. I feel... not regret, but a bit bad in the sense that I couldn't offer that extra support structure to Romain back then.

"His reply was amazing – he said, 'We grew up together, I wouldn't change anything.' It was kind of him to say that."

Those whose memories of Grosjean are defined by late 2012 or his later issues highlighted by Steiner swearathons in *Drive to Survive* probably overlook the fact that by the second half of '13 he was the only driver on the grid offering a consistent challenge to the dominant Sebastian





In late 2013 Komatsu's charge Grosjean gave Vettel a run for his money on a number of occasions, leading the Japanese GP for 26 laps



Komatsu and Grosjean take a lonely track walk around Suzuka in 2015 after Lotus was locked out of hospitality and had no power to its garage

Vettel. This too had a notable effect on Komatsu's professional outlook.

"I remember the Japanese GP [where Grosjean qualified fourth], going into Turn 1 Romain overtook three cars including Sebastian," he says. "But we knew that although we were leading, we had Sebastian and Mark [Webber] behind, so we were one versus two. One of the Red Bulls was going to pit early to get us out of the way, probably Mark, and then Sebastian was just going to go. So we knew we were going to be P2 at best.

"So after the pitstops, one overcut us and the



"OUR GOAL: IF THE BEST POSITION YOU CAN ACHIEVE IS THE WIN, THEN YOU *HAVE* TO WIN. IF THE BEST YOU CAN DO IS P10, YOU NEED TO FINISH P10"

other undercut us. We didn't manage the blue flags very well. And in the end Mark overtook us for P2. I remember us being very upset about it. Even though we were on the podium we were kicking ourselves. But then a race later we got P2, which was the best position we could have achieved. That was always our goal. If the best position you can achieve is the win, then you *have* to win. If the best you can do it P10, you need to finish P10."

FALL AND RISE

Post-2013 the Renault-Lotus experience deteriorated with an innovative but underfunded and largely uncompetitive car in the new hybrid

era. As the venture capitalist owners ceased to pay the bills, staff left and morale plummeted. At Spa in 2015 the bailiffs arrived and briefly locked the team out of the garage. This would prove to be a usefully formative experience for later years with Haas, where money was a particular problem from 2019 (when sponsorship monies from title sponsor Rich Energy proved as elusive as cans of said beverage on shop shelves) until the latest Concorde Agreement provided teams with more financial stability from 2020 onwards.

"What I'm learning every day, is that any experience I've had... none of it is wasted," says Komatsu. "Any experience, good or bad, I have to use all of it to do my job to the best of my ability.

"And of course, that race at Spa, I remember

it very well. From Thursday, when we didn't know whether we would be able to run the car, to Romain being on the podium on Sunday, that was amazing. At Suzuka as well, our hospitality was locked, we had no power to the garage so we couldn't send the file to the car to fire up the power unit. I had to get one of the control engineers to come and put it on a USB stick to transfer it to the PU guy's laptop to program the car. I couldn't get my engineers to the circuit – no point, there's no internet – so I asked them to work from the hotel. Romain came and we did the circuit walk [on Thursday], just the two of us.

"All that experience, how to manage people in that kind of difficult situation, how to stick together and have some positives – 'OK, this is all outside our control, what can we do to move forward positively?' – and everyone have their best go at it, all those experiences are now helping me do my everyday job."

That job is now team principal, a role vacated at the beginning of the year by Guenther Steiner ▶



in circumstances still subject to legal acrimony between the two parties. It seems fair to ask whether Komatsu saw this job as a natural next career step or whether, like Andrea Stella at McLaren, it was a case of stepping into the unfamiliar role because he was better placed than an outside candidate.

“I’d never seen myself being a team principal,” he says. “Whatever job I did, vehicle dynamicist, performance engineer, race engineer, I was focused on that. But, when you know your job very well, and you’re doing the best you can, you’re always looking – ‘OK, there’s something else limiting the performance, or stopping

“REGARDLESS OF YOUR POSITION, YOU’RE THINKING OF THE NEXT STEPS – NOT IN TERMS OF YOUR CAREER, BUT IN TERMS OF WHAT WE NEED TO DO AS A TEAM TO MAKE THE CAR GO FASTER”

us moving forward, what is it?’ You see there are constraints outside your remit and you’re talking to the other managers to see how you can improve that. So, regardless of your position, you’re thinking of the next steps – not in terms of your career, but in terms of what we need to do as a team to make the car go faster.

“So when the team principal job offer came

from Gene, I had a decent idea of what areas we can improve. That was my mentality, let’s say.”

In F1 there has always been teams without a realistic hope of winning, and plenty – drivers too – who just seemed happy to be there making up the numbers so long as the bills could be paid. After a promising start in 2016 Haas became enmired in the lower midfield, stymied by tight ▶



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budgets and a difficulty in adding performance to its cars through in-season development. In recent seasons it's been bumping along the bottom with Williams; the question is, given that the current Concorde Agreement protects teams' value by enshrining F1 as a closed shop, what incentive is there to get better? What can be a realistic aspiration for a team like Haas against powerful and wealthy manufacturer-backed organisations with many more employees and resources?

"For the longer-term future our ambition is to be in the top four and have the chance to be on the podium in some races," says Komatsu.



Although he had never envisaged being team principal, when the offer came Komatsu had a number of ideas of how the team could improve



The performances of Nico Hülkenberg in 2024 have helped Haas move into a midfield position in the constructors' championship

"Of course there's a long way to go. But for sure we're not just happy to be there. That's why Gene made a change. Last year we were last [in the constructors' championship]. For me there's no point in just participating. It's a competition. You always need to improve.

"So what we've been doing this season is focusing on improving from where we were in January, making continuous improvements and getting the results we should be producing within the constraints. And in parallel, how to remove those constraints and perform better in absolute terms. So long as we do that we have a very good chance of achieving what we want – to be at the top of the midfield consistently, on merit, and not relying on someone else underperforming. And when something happens at the front, possibly having a shout at the podium."

12 months ago that might have sounded like bluster but now, after a season where Nico Hülkenberg has ushered a Haas through to Q3 and the team sits well clear of Williams, Alpine and Sauber at the time of writing, the upper midfield is now in sight. And now, with the signing of a technical partnership with a certain well-known car manufacturer's racing arm, it looks like the next few grips on this particular wall come stamped with a Toyota logo... 



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THE ROOM WITH A VIEW

VCARB's head of vehicle performance **Guillaume Dezoteux** explains the vital supporting role of the team's factory-based operations centre

INTERVIEW OLEG KARPOV

PICTURE VCARB

"The amount of engineering you have to do in modern Formula 1 is huge – so it's crucial these days to have facilities at base to support the track team. You can't take all the staff to the races as it wouldn't be efficient, but these cars are so complex today that it's almost impossible to cover everything without remote engineering support. "In our ops room in Faenza, which we use at the weekends, we'll have between 25 and 40 people working. The number varies throughout the event."

1

"We're divided into macro areas of the car. So in the back row you'll have people looking at race strategy and competitor analysis. We also have tyre engineers here, monitoring the tyre status on both cars and doing some analysis to optimise tyre usage. We have people looking at simulation software – they try to replicate what the car does on track and predict what it will do with a different setup or in different conditions.

"There's also our software developers who

develop in-house software that we use. There are no off-the-shelf products we can buy, so we have applications we develop ourselves, and the engineers are also in the room to check that the latest version of the software is doing what it's supposed to be doing.

"We also have IT support because we rely on a lot of systems running live so that we can work with the same tools as on the track. We have live telemetry, live timing and GPS, live

communications, we listen to all the other cars. That requires a lot of IT preparation and support."

2

"In the front row we have representatives from a number of departments, most of them from vehicle performance. We have vehicle dynamics engineers who monitor different areas of the cars, braking systems, suspension systems and the power unit.





"Then we have performance engineers who support the trackside performance engineers on a one-to-one basis. They look at the live telemetry, listen to the drivers' comments, run some simulations, do some analysis and make a series of recommendations to the race engineers for their consideration in terms of setup, and also directly to the drivers for the adjustments they can make to the cars while they're running, like differential settings, brake balance mapping,

engine brake mapping and so on. And that's a lot of data to look at and analyse, so support from home is important.

"We have a similar facility in the UK, where we have other people from the strategy and aerodynamics departments."

3

"The big screen on the side wall of the room we

use for a variety of purposes. This picture is from a Friday during the US GP weekend. It shows the schedule for the day, with the times of meetings and briefings. During winter tests we also have different shifts, because for four days we work a full 24 hours, and there are always people in this room, even at night – because the track crew, the night shift, need technical support to help them set up the car for the next day and do all the necessary checks. On other days, we'll have different things on the screen. For example, during the race, we'll have all the drivers' onboard cameras."

4

"On the wall in front, we always have something that could be useful to a lot of people. Different engineers have specific things on the screens they're monitoring, but it's good for them to be able to look at the GPS map, world feed or our strategy dashboard. So we have live timing, GPS, weather update, the broadcast and the onboard cameras.

"We always see the garage live, so we know what's going on at the track. And it's important, firstly, because it saves us a question – we don't have to ask what's happening with the car. And secondly, we can see immediately if there's a problem – if, for example, the car leaves the garage but we don't get the telemetry."

5

"The intercom matrix is quite complicated and is something you set up with the aim of getting the right information to the right people at the right time. Obviously each of us has a limit to how much communication we can digest, how many channels we can listen to. We do a lot of multitasking.

"We set up an intercom matrix based on two criteria. One is the management of critical information. For example, we know that if we have a reliability issue, we will have an expert who will look at it and give the critical information to the head of the operations room. He would inform the chief race engineer or race director at the track. It's always the track people who take action – but we can pass on our recommendations.

"Then we have a number of people who only talk to their counterparts at the track. So, for example, the tyre engineers at the base would only talk to the tyre engineer at the track.

"The system is very good. Even when we race in Australia, the communication is live and there is no delay at all, which was not possible 15 years ago."



A NEW^{WEY} DIRECTION

WORDS ANDREW BENSON
PICTURES MOTORSPORT IMAGES AND ASTON MARTIN

A Honda-engined Aston Martin designed under the command of **Adrian Newey** could be one of the hottest cars on the grid come 2026. But why did the likes of Ferrari, Mercedes and McLaren pass up the chance to secure the most successful technical leader in Formula 1 history?



IS A NEW SUPER-POWER RISING IN FORMULA 1?

Adrian Newey's decision to join Aston Martin suggests there might be.

Since buying the failing Force India team in 2018, and renaming it Aston Martin in 2022 after his takeover of the car company, Canadian billionaire Lawrence Stroll has been assembling quite the fighting force. A state-of-the-art new factory has been up and running since last year and a new wind tunnel comes on stream shortly. Even before securing Newey, the greatest designer in F1 history, Stroll had spent heavily on an engineering team packed with big names.

For the new engine rules in 2026, Aston Martin takes over from Red Bull as Honda's engine partner. Fernando Alonso, still driving exceptionally well in his early 40s, is signed up until the end of 2026. And now Newey. Suddenly, the prospect of Aston Martin being a title contender in just over a year's time has to be taken very seriously.

For Alonso, it finally means the chance to work with someone with whom the mutual admiration has run deep for two decades. And having lost at least two world titles to Sebastian Vettel driving a Newey car, and come close to joining him at Red Bull on at least two occasions in the past, Alonso knows better than anyone what having the 65-year-old joining Aston Martin means – for that team, and for its rivals.

"Thanks to Adrian and his talent and cars, we all had to raise the bar," Alonso says, "as drivers, as engineers, to be able to compete."

Newey has not come cheap though. Stroll has signed him on a deal that could see him earn £30m a year, once all bonuses and add-ons are taken into account. Stroll, however, says this is "relatively inexpensive for everything Adrian brings".

And that is a track record of 12 constructors' championships and 13 drivers' titles across three different teams in a career in which he has established himself as nothing less than a genius when it comes to the wider understanding of how to make the fastest possible racing car.

Aston Martin has Newey because earlier this year he decided to leave Red Bull, his home since 2005. And that happened because of internal upheavals at a team which had dominated F1 in 2022 and 2023 as a result of two of Newey's greatest ever car designs.

Newey told the *High Performance Podcast* in his only interview since announcing he would be leaving Red Bull: "If you'd asked me two or three years ago, would I ever be moving from Red Bull, I would have said: 'No way, it would be my last team.'"

"But over the last, really, 12 months or so things have slowly changed a bit, to the point that after Suzuka this year, I thought, 'No, I'm not being honest with myself if I stay. I need to do something different.'"

Points of departure

His decision to leave was formally announced on 1 May, in the week leading up to the Miami Grand Prix, although it had been revealed in the media a week before that.

Newey's reasons to leave boil down to two key issues within Red Bull. One was the allegations of sexual harassment levelled at team principal Christian Horner by a female employee; the other was the way Newey's own contribution to the team had, in his view, come to be undervalued by others.

Newey was unsettled by the Horner allegations, which emerged publicly in early February, but which were part of an official complaint lodged by the employee in December 2023.

High-level sources close to Newey and Red Bull have confirmed to this writer that the allegations, and the power struggle they exposed at the heart of Red Bull – between Horner and motorsport adviser Helmut Marko, and between the Thai majority shareholder, Chalermsak Yoovidhya, who backed Horner, and the Austrian arm, who had initially wanted to



Newey spoke very highly of Aston Martin's new factory at his unveiling and is looking forward to starting work there next March

remove him – were instrumental in his decision to leave.

Horner has always denied the allegations and they were dismissed on the eve of the opening race of the season by an initial internal investigation, and again in August by a second one after the complainant appealed. It remains possible that there will be further developments in this case as time goes by.

On top of this, Newey had become frustrated by what he saw as attempts publicly to diminish his influence at Red Bull. Horner has been briefing for some time that Newey was not as important as he was, and singing the praises of technical director Pierre Waché and aerodynamics chief Enrico

Alonso, beaten to world titles twice by Newey-designed cars when driving for Ferrari, will finally get to work with someone he's always admired





Balbo, along with the rest of the senior design team.

It was emphasised that Newey was not working full-time at the factory on Formula 1; three days a week, it was said. His involvement in the RB17 hypercar project was highlighted. Internally, frictions emerged as a result of this situation.

For Newey, this was an irritation. He has a drawing board at home and, as a person who emphasises the role of creativity, the idea of “presenteeism” as a relevant issue in his job is anathema. He is constantly thinking about the car, wherever he is. He talks about ideas coming to him in the shower, or in the middle of the night.

This is why, when asked at his unveiling whether he would be full time in his new role at Aston Martin, having been doing three days a week at Red Bull, he said pointedly: “I don’t know where three days a week came from.”

Credit check

Newey finds the idea that Waché deserved a larger part of the credit for the RB19, which set the standard under the new ground-effect regulations in 2022, and from which the 2023 and 2024 cars have evolved, ridiculous. He regards it very much as his car.

“ON TOP OF THIS NEWEY HAD BECOME FRUSTRATED BY WHAT HE SAW AS ATTEMPTS PUBLICLY TO DIMINISH HIS INFLUENCE AT RED BULL”

In the *High-Performance Podcast* interview, he spends some time detailing the reasoning behind the key design features. How his desire to make a narrow nose to free up airflow led to the driver’s position being moved backwards. This led to the switch from pushrod to pullrod front suspension to free up space around the front brake duct.

Wanting the gearbox to be small to make the diffuser as big as possible, and the bodywork around it to be narrow, led to switching the rear suspension the other way at the back, from pullrod – which Newey

and Red Bull had popularised with their trend-setting 2009 design – to pushrod. The other key feature that has proved both instrumental and influential was raising the front of the sidepod to pressurise the airflow along the car to push the wheel wake outboard.

These two issues are the key context to consider from Newey’s interview with Sky’s Martin Brundle at the Miami Grand Prix, when he said he had ▶







Newey with Aston's owner-boss Lawrence Stroll at the unveiling in September. Newey likes the fact that Stroll is a throwback to team principals of old who owned the team they ran

been considering leaving for “a little while now, if I’m honest”, adding: “I guess over the winter a little bit and then as events have unfolded this year I thought... I’m in a very lucky position where I don’t need to work to live.”

They are context, too, when he says of Red Bull: “It is now a very mature team, so I felt able once we got through the design of the 2022 car to sit back a little bit, because the 2023 and this year’s car were very much evolutions of that first car.

“I decided to stop Red Bull really only the Suzuka weekend back in April. Had no idea what I wanted to do next. Just wanted a blank mind and was hoping the spark would come that this would be the direction. [My wife] Mandy was a big part of that. She was probably worried I would drive her a bit mad if I was at home too much.”

When he first announced his decision to leave Red Bull, some speculated Newey might take time off from F1, possibly even never come back. But it was always clear there would be another team

After all, why negotiate an early exit from his contract, securing the ability to work for a rival from March 2025, in time to have input into a design for 2026, if you simply intended to go off sailing with your wife on your new super-yacht?

Had that been Newey’s intention, he could have simply left at the end of his contract, no need for negotiations, and not disputed the non-compete clause that theoretically should have made him unavailable to another team until the end of 2026. Which, incidentally, Red Bull initially briefed would be the case to some media outlets when news of Newey’s decision to leave first broke on 25 April.

Ferrari, Mercedes and McLaren say no

At the time, the assumption in F1 was that he would surely end up at Ferrari, who twice previously had tried to lure him, only for the deal to collapse – at least once as he was on the verge of signing.

Newey did talk to Ferrari – he met team principal Frédéric Vasseur in London, and he and Amanda were planning a house-hunting trip to Tuscany, according to a source close to them. But the talks went nowhere, and by the summer it was well-known within F1 that the Ferrari move was not going to happen.

By then, Mercedes and McLaren had also ruled themselves out.

Mercedes team principal Toto Wolff says he discussed the idea of signing Newey with technical director James Allison, but they concluded together that it was not the way forward.

“WHEN HE FIRST ANNOUNCED HIS DECISION TO LEAVE RED BULL, SOME SPECULATED NEWAY MIGHT TAKE TIME OFF FROM F1, POSSIBLY EVEN NEVER COME BACK”

McLaren Racing chief executive officer Zak Brown is a close personal friend of Newey, and he was initially interested – but not at any price. Brown ruled himself out early on when he realised how much it would cost to have Newey, and because he was concerned about disrupting a team that was just beginning to prove it already had what it takes, thanks to the progress the engineering department has made since Andrea Stella took over as team principal at the start of 2023.

That left Aston Martin as the ▶



It remains to be seen how some of Aston's previous hires, such as Dan Fallows – who worked with Newey at Red Bull – will now fit in

obvious frontrunner. Newey had talks with Williams – but it has too much to do before it is competitive. And while Flavio Briatore made a late pitch after he was installed as executive adviser – and effective boss – at Alpine, that team has too many questions hanging over it.

For Newey, a few things coalesced to make Aston Martin the obvious choice. One was the new factory.

“These facilities are just stunning,” Newey said at his unveiling. “It is not an easy thing to do to build a brand new factory in a brand new site and have a really nice warm creative feel to it, because that is what we’re here for, to be creative, to come up with good solutions and good communication. I’ve seen some new buildings that haven’t quite fulfilled

Newey was known to have been unsettled over the harassment claims against Horner (seen here with wife Geri at the first race of 2024)



that. I am so looking forward to starting.”

If you read that last sentence as a bit of a swipe at the beautiful but antiseptic McLaren Technology Centre, where Newey spent his last couple of years under Ron Dennis, you might not be far wrong.

The other was the role of Stroll himself. The fact that he had could offer a mouth-watering financial package was obviously a part of the appeal, but for Newey it has never been about the money – and he already has more than he could ever need.

It was Stroll’s role as owner-boss that appealed particularly. Newey says: “If you go back 20 years, then what we now call team principals were the owners. In this modern era, Lawrence is unique in being the only properly active team owner and that is a different feeling when you have somebody like Lawrence involved like that. It’s back to the old model.

“The chance to be a shareholder and partner is something that has not been offered before and it became a very natural choice.

“I WAS JUST STARTING TO FEEL A BIT STALE. I JUST FELT AS IF THE EASY THING TO DO WOULD BE JUST SIT THERE, COUNT STATISTICS, TAKE THE MONEY AND GO HOME IN THE EVENING” **ADRIAN NEWEWY**

“At Red Bull I was just starting to feel a bit stale. I just felt as if the easy thing to do would be just sit there, count statistics, take the money and go home in the evening. But I wouldn’t have been honest with myself if I’d done that and it would have been for all the wrong reasons.”

Five years

Stroll has a reputation as a demanding, sometimes difficult,

person, and it remains to be seen how they get on in the long term.

Can Newey turn Aston Martin into a winner? Ask Stroll whether Newey is the final piece of the jigsaw puzzle, and he says: “There have been many pieces of the puzzle. Adrian is the biggest part of the puzzle from a technical leadership point of view. He will be leading the team and that will have a trickle-down effect through the whole organisation.”

Newey has effectively given himself five years to make the team a winner. “By the time I’m in my 70s,” he says, “I would like to be in the position Rory Byrne is at Ferrari, where I’m a respected consultant but not full-time.”

It might not take anywhere near that time, but Aston Martin has a lot to prove. It looks certain to finish this year fifth in the constructors’ championship, which on the face of it is a disappointment, especially in view of its strong start to 2023, when it was initially the closest thing to a challenge to Red Bull and Alonso took a series of strong podium finishes. It could – and should – have won Monaco that year, had it made the right tyre choice at a pitstop just as it started to rain.

Both the last two seasons have followed the same pattern: a strong start (albeit less strong this year than last) before a dramatic tail-off. Which raises questions not only about whether it fully understands the current rules, but also about its ability to sustain an effective season-long development programme.

Asked about this earlier this season, engineering director Luca Furbatto, one of the big names Stroll has recently recruited, said the effect of trying to design F1 cars while in a rapidly growing team and bringing new facilities on stream all at the same time should not be underestimated.

Newey, though, could be the missing link it has been missing. His strengths lie not just in his genius for aerodynamics, and ability to visualise the airflow around the car, but in his uniquely rounded set of abilities.

He’s also a terrific race engineer, someone well aware of what a driver ►

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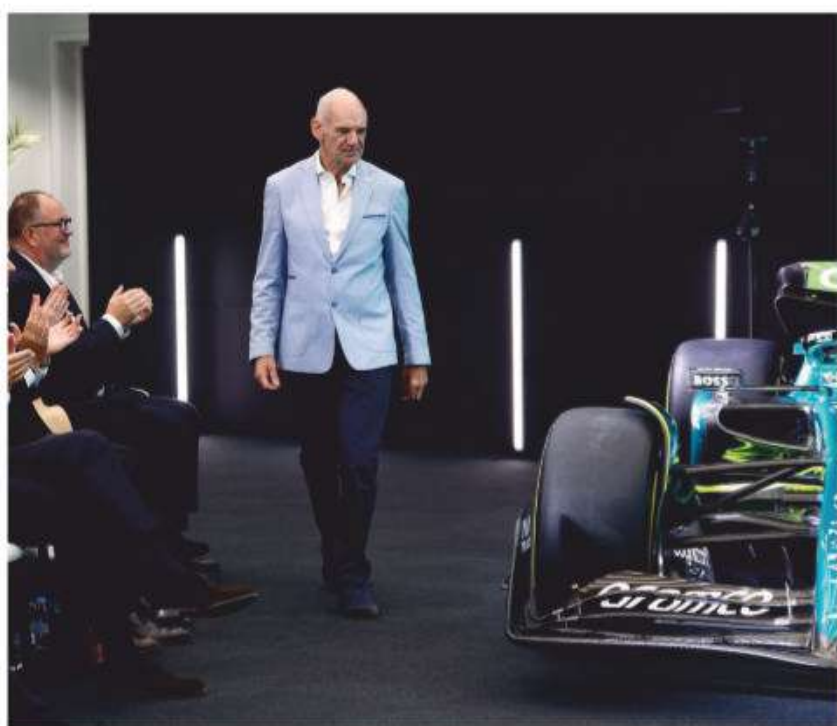
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Team Aston Martin for 2025 although Newey cannot start until March of the new season



The early betting had Newey moving to Ferrari, but that possibility had fizzled out by the summer

“MOVING TEAMS IS ALWAYS A BIG COMMITMENT TO TRY TO UNDERSTAND HOW EVERYBODY WORKS, TO ENGAGE, TO BE INVOLVED IN STARTING THINGS”

ADRIAN NEWEY

needs to get the best out a car on track. And he's not proud. As he puts it: “I still love the challenge of trying to add performance to the car, that is my prime motivation and what gets me up in the morning.”

How will he work? Aston Martin technical director Dan Fallows, who was head of aerodynamics under Newey at Red Bull before moving to his current role in early 2022, says Newey goes where he thinks he can add value. He will draw the car initially, one presumes. Then he will go to some

meetings, and wander around the factory talking to people and discussing ideas. For him, it's not important where the idea that improves lap time comes from, only that it does.

Shock of the new

Newey describes Aston Martin as “a new challenge”. He says he wants “to feel as if I can make a difference – one of my policies has been to never join a successful team, to join a team that at that point in time were struggling a bit.

“Williams had had a bit of a lean period, same with McLaren. Not to join a team at its peak. But to feel as if it's a team I can go in and hopefully make

a difference and enjoy working with the people and working a similar way with them and go on a journey together.

“I enjoy standing at my drawing board and trying to come up with ideas. The bigger proportion of working with my engineers in all three departments, and then going to the races and trying to understand what the drivers are feeling and turning their descriptions of how the car is behaving into an engineering language to improve the car.

“Moving teams is always a big commitment to try to understand how everybody works, to engage, to be involved in starting things. It takes time and commitment. So, yes, of course once I start I will be fully in. I need to be, I have to be.”

He has his work cut out. Technically, he cannot start at Aston Martin until March, by which time the 2026 aerodynamic regulations will have been out for a couple of months. Although you can bet Newey will be scrutinising them as soon as they are and working out what they mean; almost certainly, too, playing with ideas on his drawing board at home.

“The aero regs will be announced 1 or 2 January so I will be joining two months into that,” he says, “It will be a case of getting myself up to speed as quickly as possible and, just as importantly, getting to know everyone here as quickly as possible and how we get the best out of each other.

“They are an opportunity. Whether we will be able to capitalise on that, we just don't know. I don't spend too long fretting on these things. Just get on and do the best we can.”

Andrew Benson is the BBC's Formula 1 correspondent



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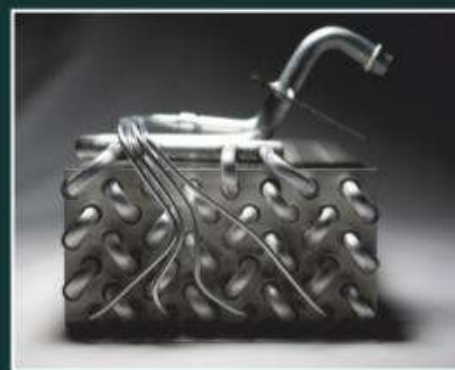
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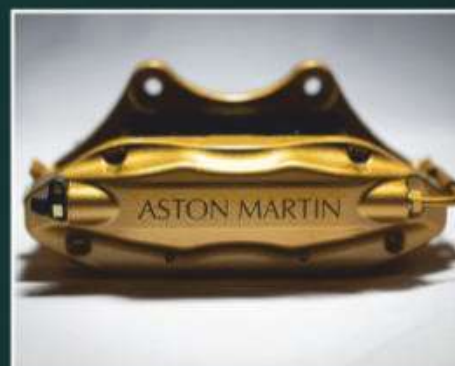
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NICO HÜLKENBERG



10 THINGS I LOVE



The Haas driver likes to be in charge of the family playlist...



Travel

Working in F1 gives you a taste of many different countries. You have a good opportunity between races, when you're somewhere in the world, to do trips to nearby countries, new and exotic destinations. But I also like to travel independently, away from racing. And with a family we've had to choose our holidays a bit different in the past few years. I like the mountains but I'm more a beach guy – shorts, flip flops, sunglasses, it's just easy, casual.



PICTURES: SIMON GALLOWAY; MALCOLM GRIFFITHS; SHUTTERSTOCK

Family

My family is young and still new. Noemi [Nico's daughter] just turned three at the end of last month, and it's great. It's fun. She's much more daddy, much less mama. That's quite cool, and I enjoy being a father. Of course, I miss them while I'm away, especially in these triple-headers. So between Mexico and São Paulo I'm flying home for two days to see them, to break it up a bit. It's different from not having kids, it's a different dynamic – not that there's any friction! And I get a lot of support from my wife [fashion designer Egle Ruskyte].



F1 onboards

Before and after races I spend a lot of time watching onboard footage, to learn and look for things for ourselves, but also to learn from the competition. It's quite a nice tool. Nowadays, with the F1 TV app, it's so accessible, so easy to go and find a lot of interesting things. It's something I enjoy. I don't look at everyone's. It depends on what I'm interested in or what I want to get out of it. Different teams you look at, sometimes the main competition, but then also the top cars. Because obviously that's where you see where the differences are and what they do.



Special cars

I really like rare and individual stuff – not the big production-line cars. Well, obviously, I love a Porsche 911. Everyone loves the Porsche 911. But I mean the even rarer stuff, the Koenigseggs, Paganis, small privately owned manufacturers that make everything kind of custom, a lot of it in-house. The attention to detail on those cars is just off the charts. It's basically drivable art. I'm not so into vintage stuff yet, such as those hand-built Ferraris from the 1950s. Maybe that will come later in life. They're beautiful, I love looking at them, but they're a bit out of my budget.

Racing

So – racing, competition, Formula 1. It's kind of a package.

A fascinating, cool little industry. It's very intense when you live it, especially when you're in the driving seat. You know, the peaks of quali, race starts, the rushes that you get. It's kind of hard to find



that outside of this sport. And I've done testing as well so I know what I'm talking about. I enjoy it very much, probably more than than ever. When I came back [after three years as a test and reserve driver] I didn't know if I was going to enjoy it that much, but it turned out pretty good, actually.

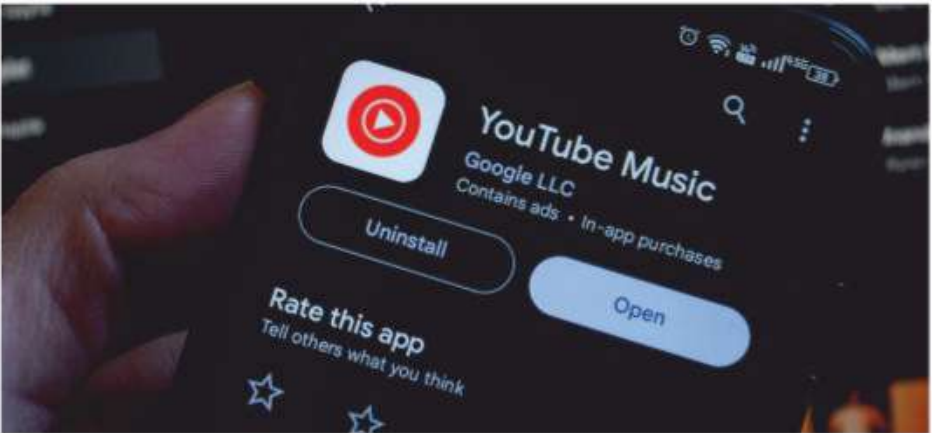
Tennis

I'm big tennis fan. I always look forward to Grand Slams, the two weeks of watching – obviously sometimes it's either in the morning or the evening with the time differences depending on location, if it's Melbourne, or if it's the US Open, and where we are. It's just so different, one player versus another. It's so different to what we do, a bit more simple and back-to-basics. I love looking forward to a Grand Slam thriller, to a great quarter-final, semis, a final, when they go head-to-head. It's great to watch and I can easily watch a five-hour tennis match and not get bored. When I play I prefer hardcourt – it's tougher on your body and a bit faster but with clay, just everything gets so dirty. It's a dirty business!



Music

In the Hülkenberg house there's always music, even if it's just playing in the background. I just like to have music playing – different type of stuff. Sometimes jazz stuff – put it on YouTube and let that play. Sometimes classic, sometimes Barry White... Who's in charge of the playlist? Me, me, me!



Coffee

I'm not like Valtteri [Bottas], getting my own roast and whatever, but I'm definitely a coffee guy. I'm not a cappuccino guy, no – dairy isn't my product. I don't consume dairy. Yeah, just straight up espresso – *puro* as the Italians say, not dirty water.



Watches

There's a huge range in the watch world, both in style and budget – there are some which cost several million, which is kind of crazy. What I love is the art of the watch, and the precision of the mechanism inside, such a delicate and detailed piece of engineering. It's the design element for me as well as the jewellery aspect. And I suppose it can sort of be an investment nowadays. The beauty of the watch is in the different styles – sometimes I like a classic one, sometimes I like a loud, in-your-face one, sometimes understatement. It depends on what else you're wearing.

Architecture and design

This is a personal interest I've kind of always had. I don't watch those TV shows where they build expensive houses and I don't have a particular favourite style of architecture – there's so many different designs and architectures across the world that are beautiful, it would be tricky to nail one down.

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THAT
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A
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SURTEES TS14

The only world champion on two wheels and four made a brave attempt to follow the likes of Jack Brabham and Bruce McLaren into team ownership. But he took on too much of the hard graft himself...





SURTEES TS14

NOW THAT WAS A CAR No133

Time in hospital bookended John Surtees's life as a Formula 1 team owner. Reflections from his sick bed first fired his ambition to become self-reliant, then nearly 10 years later resigned him to the sad reality that the dream was over. His friends Bruce McLaren, Jack Brabham and Dan Gurney had succeeded in flying under their own steam, and so too did Surtees – on occasion with style. But too often and for too long team ownership became a graft that paid a heavy physical toll for one of motor racing's titans. Perhaps he felt too keenly the weight of responsibility and his own high expectations that others found so hard to live up to. It also probably didn't help that John always took this most demanding of sports so personally.

No, the Team Surtees years are not primarily how we remember the man dubbed *Il Grande* John by the Italians who so loved him at MV Agusta and Ferrari. And yet it's also wrong to dismiss the Surtees Racing Organisation as an F1 footnote. Too many good racing drivers were cast and enough near-miss great moments played out between 1970 and 1978 for Surtees the team chief to be forgotten so easily. The bloody-minded character, the Corinthian belief in fair play and sheer work ethic of the man demands respect. Seven years after his death at the age of 83, the rider/driver forever labelled as the only winner of world titles on two and four wheels remains deeply loved and missed. The tribute at this year's Goodwood Revival, led by another titan, Giacomo Agostini, 60 years after Surtees's ascension to F1 immortality at Ferrari, was proof enough of that.

By October 1969, Surtees was feeling tired and ill. The

pinprick of light provided by an inherited podium third (two laps down) at the United States GP barely flicked the needle as the 35-year-old contemplated his future from hospital following a diagnosis of viral pneumonia. BRM had been a massive letdown. Much like Honda, much like Cooper and ultimately, much like Ferrari, in the choppy and politically charged wake of his 1964 success that had eventually led him to storm out and away from Maranello in the spring of '66. There was only one thing for it: to place his fragile trust in the only figure he knew he could rely upon for total commitment – himself.

Surtees had already started down the eponymous team route anyway. A car adapted from a Len Terry design dubbed the TS5 had been run in Formula 5000 that season for David Hobbs and Trevor Taylor, so it was logical to take the next step as a fresh decade dawned. In the 1970s John Surtees would be a player/manager in F1. By the middle of 1970, his own TS7 was ready, built by a small staff from a base near his home in Edenbridge, Kent. After early rounds running a McLaren, the new car took its bow at the British GP and at the Canadian GP in St Jovite Surtees scored its first points, with a fifth-place finish, then Derek Bell added another – the only he'd ever score in F1 – at Watkins Glen. The boss also pulled off a landmark owner-driver-constructor win at the non-championship Oulton Park Gold Cup. Shades of Bruce, Jack and Dan, then – and in all, a highly promising start.

The first full F1 season for a Surtees, 1971, was again pockmarked by bright moments with the new TS9. An alliance with veteran team patron Rob Walker and sponsorship from Brooke Bond Oxo offered potential for Surtees himself,

while German Rolf Stommelen ran a car sponsored by *Auto Motor und Sport* and the caravan manufacturer Eifelland. Bell had a one-off crack at the British GP, while later in the season Mike Hailwood entered the story. The best bits? Surtees's third place at the Brands Hatch Race of Champions, behind only Clay Regazzoni's Ferrari and Jackie Stewart's Tyrrell; points scores in the Dutch and British GP; and another Oulton Gold

THERE WAS ONLY ONE THING FOR IT: TO PLACE HIS FRAGILE TRUST IN THE ONLY FIGURE HE KNEW HE COULD RELY UPON FOR TOTAL COMMITMENT – HIMSELF

Cup triumph. Stommelen finished a place ahead of Surtees at Silverstone and was sixth in Monaco, but the highlight was surely Hailwood's near-miss at the Italian GP. He was among the gaggle that raced for the line at Monza in F1's closest finish, only to find himself classified fourth, just 0.18s down on Peter Gethin's winning BRM.

Hailwood should have been the perfect fit for Team Surtees,





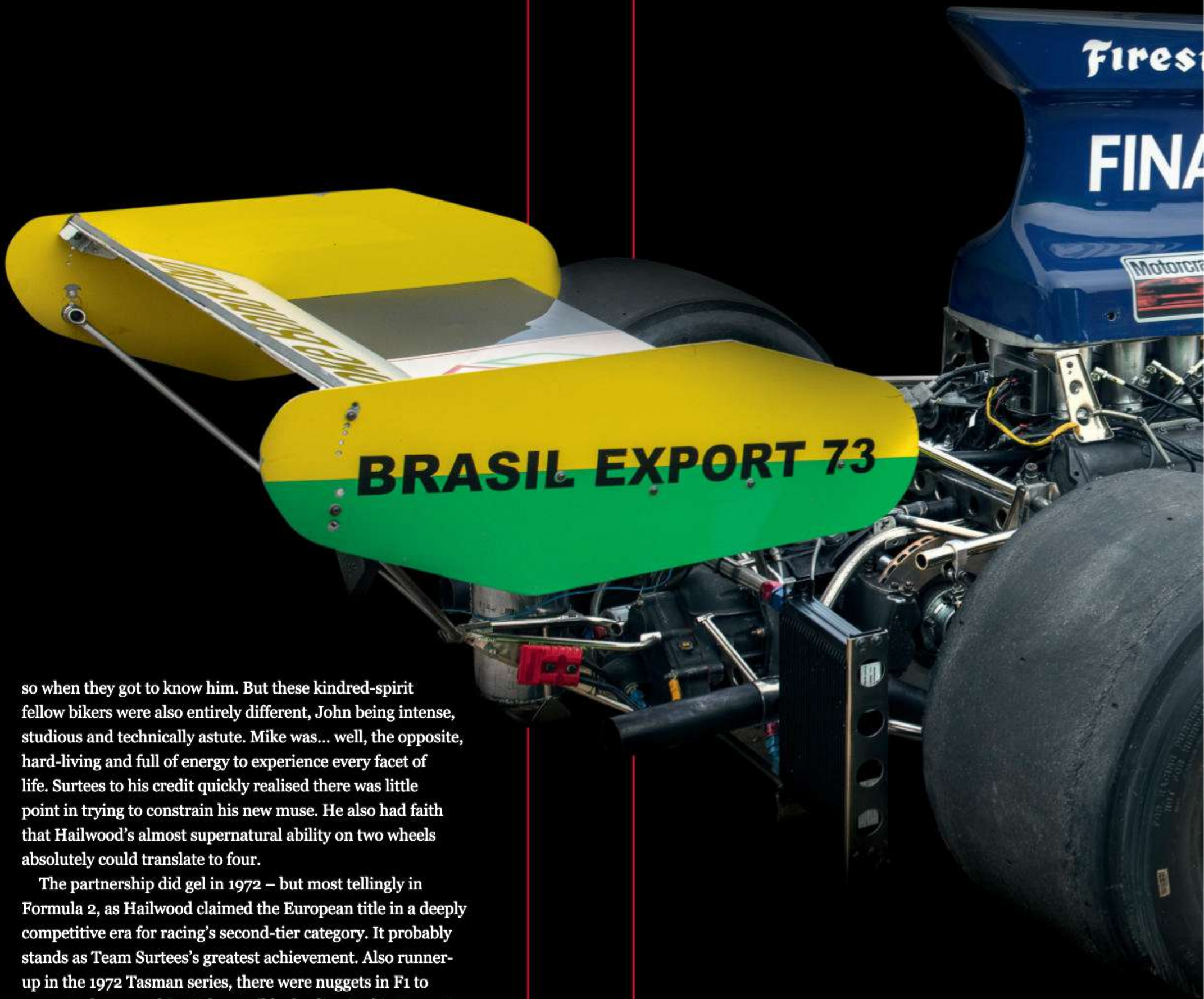
Pic to come



through the obvious parallels with John. And the partnership did work – to a certain degree. A motorcycling sensation, Hailwood is revered as among the best ever on two wheels – for some who saw him race, perhaps *the* best there's ever been. Their fathers had raced each other in motorcycle sidecars before WWII and, like Surtees, Hailwood progressed from Norton to MV. Like Surtees, he won a lot of world titles. Like Surtees, he made the switch to four wheels simply to race more. Like Surtees, he won quickly in Formula Junior and progressed directly to F1, in 1963. Like Surtees, he didn't feel entirely at home in the less friendly F1 paddock. But unlike Surtees, the results didn't follow. Having bought a share in Tim Parnell's F1 team, he scored a point at Monaco in 1964 but eventually sold back his stake and returned to motorcycling feeling a little bruised.

Six years after his final mid-1960s grand prix start, Hailwood was back for another crack at F1, with Surtees at Monza. What a story it would have been had he, not Gethin, won that day in 1971. 'Mike the Bike' had begun his second quest to become 'Mike the Car' because he was at a loose end after Honda's withdrawal from bike racing. Paid £50,000 not to ride for anyone else, here was a perfect opportunity to try the cockpit again. F5000 was a happier scene for him to settle into, while experience logged with John Wyer's Gulf-backed team of Ford GT40s also helped the transition.

Surtees loved him, of course. Most people did, especially ▶



so when they got to know him. But these kindred-spirit fellow bikers were also entirely different, John being intense, studious and technically astute. Mike was... well, the opposite, hard-living and full of energy to experience every facet of life. Surtees to his credit quickly realised there was little point in trying to constrain his new muse. He also had faith that Hailwood's almost supernatural ability on two wheels absolutely could translate to four.

The partnership did gel in 1972 – but most tellingly in Formula 2, as Hailwood claimed the European title in a deeply competitive era for racing's second-tier category. It probably stands as Team Surtees's greatest achievement. Also runner-up in the 1972 Tasman series, there were nuggets in F1 to suggest what was ultimately possible: leading Jackie Stewart and setting the fastest lap in the South African GP, only for a bolt in his TS9B's suspension to break; qualifying on the front row and finishing second to Emerson Fittipaldi in the Race of Champions; passing Emmo for the lead at the bitterly cold Silverstone International Trophy, only for a faulty cooling system cap to cost him dear. Solid points followed in the heart of the F1 season: fourth in Belgium, sixth in France, fourth in Austria – and then an inherited second place back at newly chicaned Monza, despite a loss of power when the airbox blew off his car. Meanwhile, Surtees was making what would turn out to be his final F1 start as a driver in the car you see here, TS14. He was a footnote retirement: fuel vaporisation, 20 laps in. Still, how Hailwood adapted to his airbox loss to land his best F1 result sweetened the day.

After the race, Surtees and Hailwood mounted a pair of shiny, new Gilera 150cc motorcycles and zoomed off into the

darkness towards their Arcore hotel, with cheers from the Italian fans who loved them ringing in their ears. All must have seemed right with the world that evening.

But that was as good as it would ever get for the Surtees-Hailwood partnership. TS14 was expected to carry Hailwood's forward momentum into 1973 and yet ultimately the model let its hero down. The story of Team Surtees's life.

For a start, conceiving the car early enough to be sent into action for the closing races of 1972 ended up playing against it. Surtees was proud of the fact his new chassis was the first F1 built to new deformable side structure regulations set for introduction from the 1973 Spanish GP – a response to Jo Siffert's fiery and fatal accident in his BRM at the 1971 Victory Race at Brands Hatch. Although John complained a delay on that Montjuïc deadline caused by a general lack of new, stronger fuel tank bladders left TS14 needlessly overweight.

SURTEES TS14

stone



The car featured a 'sandwich' monocoque comprised of an outer sheet of aluminium, a layer of compressed foam material and a layer of fibreglass, the three compressed into a solid, but light single layer. This formed the outer skin of the main part of the monocoque and alongside the cockpit, on each side, was the new deformable structure protecting the fuel tanks. The flexible bag fuel tanks in the main monocoque, each side of the cockpit, were fitted through detachable panels in the bulkhead behind the cockpit, designed so that if a tank should leak there was no way the petrol could seep into the driving compartment.

The deformable structures on each side brought the overall width of TS14 almost out to the centrelines of the wheels and contained the twin water radiators. Long, deep ducts on top of the sidepods fed air to the radiators and was expelled out the back. The structures were rigidly attached to the main monocoque, with a full width square-tube frame forming the

basis of the rear bulkhead to which the Cosworth V8 engine was attached. At the front TS14 featured a smooth full-width nose cowl devoid of openings, in an attempt to direct the airflow over the front suspension and along each side of the windscreen and into the radiator ducts. The inelegant airbox and fully exposed engine were a visual sign that, for all of the solid engineering principles Surtees lived by, his cars were a step behind contemporaries such as the McLaren M23 and Brabham BT42 from respective Gordons Coppuck and Murray.

Along with the weight, Surtees also suffered a tyre disadvantage when supplier Firestone withdrew from F1, backtracked, but only made one construction available. Its products never won another GP. John also admitted a lack of budget left him with a tired batch of high-mileage DFVs – and that contributed to the team's record of chronic unreliability. Upon reflection, poor Hailwood never stood a chance. ▶

But he should have scored at least one victory in TS14. The Race of Champions at Brands in March seemed in the bag when, with just four and a half laps to go and his first F1 win in sight, the left-rear suspension suddenly let go and the car immediately slid out of control, smashing sideways into the barrier as he approached Hawthorn Bend. The car briefly burst into flames but was quickly extinguished. Mike climbed out, then threw his crash helmet to the ground.

He'd already committed the act that came to define his F1 career. A couple of weeks earlier, at Kyalami, Regazzoni's BRM collided with an already spun Hailwood. The onboard extinguisher doused the fire that had briefly sparked on the



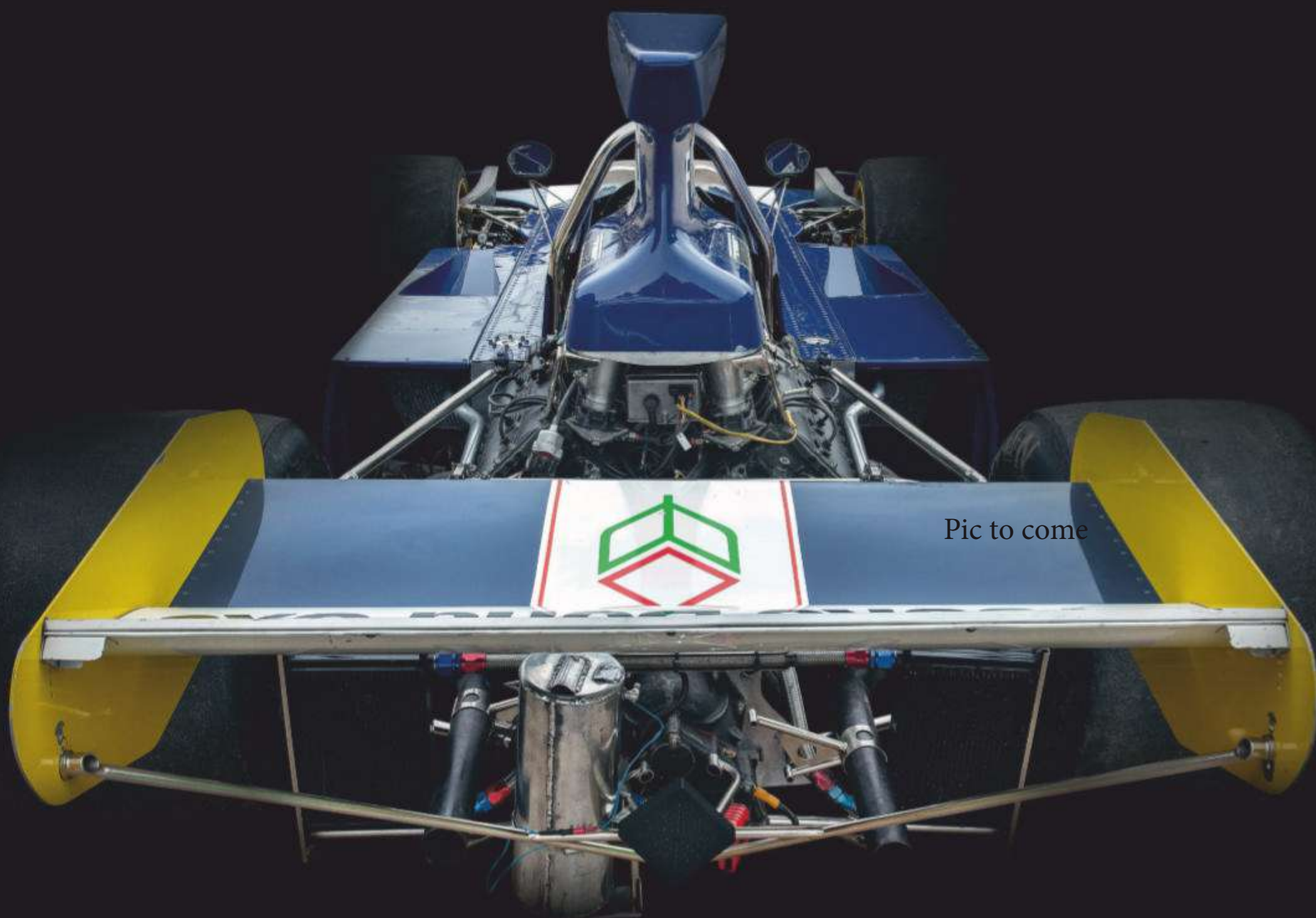
SURTEES TS14

Surtees, but as Mike jumped out he realised Regazzoni was in far greater trouble, slumped in the cockpit unconscious with flames licking around him. Without a second thought, Hailwood dived in, undid Regazzoni's belts and dragged the Swiss from the scene. Deformable structures or not, fire was such a fear back then.

Regazzoni was bruised and battered, with burns only to his hands – and thanks to Mike he was still alive. Hailwood received the George Medal for his bravery.

The season rolled on, Team Surtees gathering a litany of retirements. Hailwood rarely finished a race and, when he did, he couldn't manage a point. It became so dire it's said he took to tucking a paperback novel into his overalls to give him something to read once the car had inevitably let him down. The team never lacked ambition, of course. Brazilian Carlos Pace joined Hailwood in another TS14, while promising German Jochen Mass made his F1 debut at the British GP. But Silverstone was the infamous nadir of '73. That was the day young Jody Scheckter lost his McLaren M23 at Woodcote early in the race, spun into the pitwall and triggered a nine-car pile-up. All three Surtees were wiped out in the carnage, sending John into despair and on the rampage for Scheckter, who was told to hide in the McLaren caravan. Jody reckons he and John patched things up and actually got along quite well. Eventually.

The sum total for Surtees in 1973? Seven points, all scored by Pace with a third place in Austria, a fourth in Germany



Pic to come



and fastest laps in both. So the car was quick, at least. As for Hailwood, with a heavy heart he moved on. Surtees's new sponsor, hi-fi specialist Bang & Olufsen, was demanding Mass for 1974, so Hailwood grabbed a drive in a Yardley McLaren instead. Let off the leash, he scored in the first three races with a podium third at Kyalami, only for his flowering F1 career to be cut once and for all by a badly broken leg sustained in a crash at the Nürburgring. Unhappy in enforced retirement, Hailwood made a heroic return to his first and true love, winning a pair of Isle of Man TTs in 1978 and 1979 – only to lose his life and that of his daughter Michelle in a run for fish and chips, when a truck made an illegal turn through a central reservation.

As for Team Surtees, the post-Hailwood years were largely a struggle. The gruesome death of Helmuth Koinigg, decapitated at Watkins Glen in his second start for Team Surtees, was the stuff of nightmares at the end of 1974. By then, both Mass and Pace were gone, having reached the ends of their tethers – just as Tim Schenken had back in 1972. There were tallying tales of a team owner who always thought he knew best on setup – and couldn't resist jumping into the cockpit on occasion to prove it.

In the years that followed, there were brief ejaculations of hope. Gritty Australian Alan Jones gathered momentum in the TS19 in 1976 (until he too fell out with the boss), as the team courted controversy with its sponsorship from prophylactic manufacturer Durex. The company ran an ad campaign with a fully liveried TS19 and the tag line: 'The small family car.' The incongruity of such an, ahem, straight-up figure such as John Surtees causing such a hue and cry will always raise a smile. Banned by the BBC? Today, it's a badge of honour.

But the financial plight for Team Surtees was never a joke. Vittorio Brambilla, a one-time surprise F1 winner with March in 1975, drove for Team Surtees in '77 and '78. When the Italian was injured in the Italian GP crash that led to the death of Ronnie Peterson, René Arnoux stepped in. John found the little Frenchman a breath of fresh air, but was never going to stand in his way with a Renault future beckoning.

In November 1978, Surtees found himself back in hospital, admitted for treatment to his legs. The problem was traced back to a blood transfusion he'd had 13 years earlier after his huge Can-Am crash at Mosport. Again, just like in the autumn of 1969, here was time to reflect. He decided to call *Autosport's*

Nigel Roebuck, who paid a visit to St Thomas's Hospital – and John simply asked Nigel to break the news to the world that Team Surtees was finished. Imagine such a thing today.

Surtees sold his Formula One Constructors' Association membership to Frank Williams (whose team was finally on the cusp of greatness) and with a sense of relief stepped back. Fellow Edenbridge resident Peter Briggs, who had previous with Team Surtees, ran TS20s in the 1979 Aurora-backed British F1 championship, with Gordon Smiley claiming victory at Silverstone in October. That was Team Surtees's last-ever race. Thereafter, the patron was free to experience other aspects of life, while motor sport enthusiasts could fall back on happier memories of their hero, to the days when he'd simply been *Il Grande John*. He'd given it everything. 🏁

RACE RECORD	SPECIFICATION
Starts 35	Chassis Aluminium alloy monocoque
Wins 0	Suspension Double wishbones (front), upper and lower parallel links (rear, coil springs over dampers, anti-roll bars)
Pole positions 0	Engine Ford Cosworth DFV V8
Fastest laps 0	Engine capacity 2,993cc
Podiums 1	Power 410bhp @ 9000rpm
Championship points 7	Gearbox Hewland FG400 five-speed manual
	Brakes Steel
	Tyres Firestone
	Weight 590kg
	Notable drivers John Surtees, Tim Schenken, Mike Hailwood, Carlos Pace, Jochen Mass

MAURICE HAMILTON'S ALTERNATIVE VIEW



The author before his trip around Paul Ricard in 1978 with Didier Pironi as his chauffeur.

His ride in an open-top Alpine came to a halt after the F1 car left oil all over the track

PICTURE: MAURICE HAMILTON

As Renault shuttered its Formula 1 engine programme, the pioneers who contributed to a dozen constructors' titles should have no regrets



THE END OF RENAULT as an engine manufacturer in Formula 1 will be nothing like the beginning. How could it be when the French firm arrived in the Silverstone paddock halfway through the 1977 season like Del Boy and Rodney turning up at a wake dressed as Batman and Robin? There were jokes about the Renault (nicknamed the Yellow Teapot because of its unfortunate habit of emitting clouds of steam) but, beneath the ribaldry, there was an unmistakable nervousness among British teams fearing the beginning of the end to their decade of uncomplicated running with the Ford-Cosworth DFV.

On the other hand, the more technically minded observers were as excited as Mohammed Ben Sulayem spotting a photo opportunity. They were happy to delve into the intricacies of turbocharging thanks to Renault taking up a complex option that had been available since 1966. Everyone else in F1 had dismissed that

preference as being uncompetitive in the same way the owner of a SUV with personal number plates would ridicule the thought of doing the school run on a tandem. Turbocharging was for pre-war Bentleys at Le Mans, not for a Tyrrell made in a Surrey woodyard.

There was a touch of the past at the debut when Renault invited everyone to their motor home on race morning because it coincided with Bastille Day. This national celebration of a major event in the French Revolution and the storming of a medieval armoury in 1789 presented an ideal excuse for introductions while serving a flavour of France. Brie de Meaux and Sancerre may have made a stark and stylish alternative to a bacon buttie in the paddock café but there was no fear of the yellow RSO1 storming the F1 arsenal even though Jean-Pierre Jabouille had managed to qualify ahead of a Shadow and a Surtees.

Turbo failure (cue smoke and scoffing) just



After its debut Renault missed two races and then re-appeared at the Dutch GP with a raft of changes, demonstrating it meant business. It would be over a year before it scored any points

as Jabouille worked his way into 16th place meant a rethink and, in the more relaxed 1970s, taking advantage of the opportunity to miss a couple of races. When Renault turned up again in Holland, the seriousness of intent was demonstrated by major modifications to the inlet manifold, ignition, camshaft design, exhaust and Kugelfischer fuel injection. (Such a wholesale upgrade today would not only have Sky F1's Ted Kravitz on speed gabble but the stewards would also be awash with protest because – well, this couldn't possibly be legal, could it?) Despite never having been to Zandvoort before, Jabouille qualified on the fifth row. When he retired with a broken top link (rather than turbo trouble), that was seen as progress. It would be a false dawn. The F1 Bastille would remain impregnable for quite some time.

It was not until halfway through 1978 that the routine retirement reason of either turbo or engine failure would show signs of making way for the single car entry being classified as a runner at full distance. Renault's first championship points came with a fine fourth place in the

It was explained how the competitions department in the Alpine premises in Dieppe had been closed and the racing facility at Viry-Châtillon expanded. It was to be the start of a distinguished history at Viry and the prompt for protests at this year's Italian Grand Prix over the engine department's imminent closure.

Back in 1978, the Renault people were telling us about how a state-of-the-art dyno was coming on stream and ensuring engine and turbo malfunctions were likely to be a thing of the past. That was all well and good, but there was still a

Renault made its F1 debut at the 1977 British GP. The RS01 was powered by a turbocharged engine, which raised more than a few eyebrows



was told to hang on to the chrome bar coming across my left shoulder. No full seat harness; no flameproof overalls. Never mind: the crash helmet had a sticker with my name on it – presumably to make identification easier for the photographer rather than in the event of an accident. In truth, wild horses wouldn't have stopped me getting into that car. And Pironi was about to demonstrate why with playful power-slides through the curves leading to the back straight.

The big question was: could he take the very fast right-hander at Signes flat? Yes, he could!

Moments later, the adrenalin levels received an unexpected surge from a different direction as the A442 suddenly snapped sideways under braking for the next right hander. I could tell from my driver's reactions that this wasn't in the script.

Gone were the languid dabs of opposite lock, replaced by urgent and violent grabs of the wheel – first this way, then that – as if it were red hot. As we made a glorious sideways exit under full power, the cause of the drama became evident. A hundred metres or so further on, a grinning René Arnoux was nonchalantly leaning against the rear wing of his parked RS01 while giving Pironi a round of applause. The F1 car's engine had just blown – and we had found the oil.

Needless to say (considering the cavalier approach to safety at the time) there were no flag marshals on duty. No matter. No harm done. "Sorry about that!" grinned Didier when we got back to the pits. I told

him not to worry. Guaranteed the same outcome, I'd go through it all again.

Which, I daresay, is what those in the engine department at Viry-Châtillon are thinking right now as they look back on finally storming the F1 Bastille with 11 drivers' and 12 constructors' titles.

TURBOCHARGING WAS FOR PRE-WAR BENTLEYS AT LE MANS, NOT FOR A TYRRELL MADE IN A SURREY WOODYARD

penultimate race of the season at Watkins Glen. With its tail up following victory in the Le Mans 24-Hour race, Renault felt confident enough to fly a gaggle of journalists to Paul Ricard in November for a full-blown preview of the following season.

way to go – as I was about to discover.

Renault had brought its Le Mans winner (minus its enclosed top) to Paul Ricard. Didier Pironi was on hand to act as chauffeur for any willing passengers. I climbed into the left-hand seat, secured the lap and diagonal belt and

BRAWN GP

F1's last fairytale: when Brawn rose out of the ashes of Honda



Although Brawn was late to start pre-season testing in 2009, in part due to changing the already-designed car to accommodate Mercedes and not Honda engines, its performances in the days it did run showed it would be a contender. In its first race, the Australian GP, the team nailed it with an amazing 1-2 on debut for Jenson Button and Rubens Barrichello



After Honda withdrew from F1 in December 2008 and the operation was bought by Ross Brawn for £1, the story already had a comic book feel to it. Yes, Honda bankrolled the team with a £100m budget but after success in Australia fans at the next race, Malaysia, were in no doubt as to who the real hero was, as this banner shows



At the Spanish GP Brawn did a one-race deal with Sony Pictures to promote the Terminator Salvation film, starring Christian Bale. This involved small decals on the rear wing endplates of both cars and, more menacingly, a life-sized replica of the T-800 cyborg lurking in the back of the team's pit garages





Even though other teams were now altering their diffusers to mimic those of Brawn (and Williams and Toyota) after they were declared legal in China, the Button juggernaut rolled on in Monaco. Jenson claimed his fifth win of the season and with it a healthy championship lead

After four races of minor points scores from the British to European GPs, Button needed a good result in the Belgian GP. However, after only qualifying 14th Button was collected by Romain Grosjean's Renault at Les Combes on the opening lap. All of a sudden a scrap for the title was on

Going into Brazilian GP Button knew he had to finish within four points of team-mate Barrichello, and hope that Sebastian Vettel finished third or lower, to win the championship with a race to spare. Button was fifth, Vettel fourth and Barrichello eighth. The crown was his





◀ With both titles secured in Brazil Brawn showed some of its early season speed in Abu Dhabi, the last race of 2009. Button and Barrichello finished third and fourth in what would be the team's final GP

▼ One of the most memorable images of that remarkable 2009 season: John Button, wearing his lucky pink shirt, embraces his son after Jenson has achieved his dream of becoming a Formula 1 world champion



▲ Button and Brawn collect the team's spoils at the FIA Gala in December 2009. Except by now Brawn was no longer Brawn, having been sold on 16 November to Mercedes-Benz, and renamed Mercedes GP for 2010. Many Brawn employees were retained by Mercedes following the buyout



▲ Rubens Barrichello played a huge part in Brawn's success and, after four podiums and three pole positions in 10 races, finally claimed his first victory for the team in the European GP at Valencia. 37 at the time, it was his first success since the 2004 Chinese GP, and the 100th win by a Brazilian driver



▲
Round three, the Chinese GP, was the first race of 2009 a Brawn didn't qualify on pole or win. It was also the first time Rubens Barrichello outqualified Jenson Button. The Briton did finish ahead of the Brazilian in third, but behind the Red Bulls of Sebastian Vettel and Mark Webber

▼
Button won six of the first seven races in 2009 and it wasn't until round 11, the European GP, that Barrichello recorded his first victory for the team. At Monza, two races later, Rubens would win again, but this would turn out to be Brawn's final visit to the top step of the podium





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GG 2930	£3,750
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I965 RR	£18,000
RR I00	£185,000
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RRX I	£55,000
RXX I	£38,000
44 RYR	£5,500
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42I S	£24,000
75I SA	£9,000
N7 SAS	£3,500
SBJ 2	£18,000
SBJ I56	£3,400
3500 SE	£11,000
S7 SGO	£1,500
A9 SGS	£1,200
TI2I SLY	£750
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XIO UUU	£700
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7I0 UXV	£1,800

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▲ Brackley, home to the Brawn factory, celebrated the team's success at the end of the season. Congratulatory banners were everywhere (above) while Ross Brawn and CEO Nick Fry headed an open-top bus parade through the streets of the Northamptonshire town (top)

▼ Reliability was a massive strong point for Brawn in 2009. The team's first and only mechanical retirement came in round seven at the Turkish GP. Barrichello dropped out after 47 laps with a gearbox problem, albeit from 15th, as Button went on to claim his sixth win of the season

▲ After a superb first two races, Sebastian Vettel's win for Red Bull in China dented the team's momentum. No matter, at the very next race in Bahrain, Button took his third win of the season from fourth on the grid, despite a burn to his backside from a hot electrical box in his cockpit





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F1 WORLD CHAMPIONSHIP ROUND 19

THE UNITED STATES GP IN 5 KEY MOMENTS

REPORT BY JAMES ROBERTS

1 Title battle gets ugly

After a weekend of mudslinging, it was perhaps inevitable that the sentiments of the simmering feud between Red Bull and McLaren would be reflected on the racetrack. While Max Verstappen and Lando Norris didn't *actually* make contact at the United States Grand Prix, their wheel-to-wheel dicing took them both off the track twice: at the first corner of the race and, more controversially, four laps from the chequered flag.

The war of words began almost as soon as the teams touched down in Austin, as a row erupted over the so-called 'bib' or 'tea tray', the leading edge of the RB20's floor. Adjusting the height of the front of this is not allowed in parc fermé (between qualifying and the race) but it had come to the attention of the FIA that the RB20 had a mechanism which allowed this adjustment to be made from within the cockpit.

In reality, it was only achievable once a mechanic had taken a set of tools and delved deep into the footwell. Not as easy as, say, twiddling the knurled



Saturday smiles as Max congratulates Lando for pole. Normal service resumed on Sunday

knob that actuates the air vents on a Citroën 2CV. As such the FIA decided drew a line under the matter, although McLaren's Zak Brown continued to raise questions about the subject. If it wasn't possible to adjust easily, he mused, why did the FIA feel the need to seal it up?

Brown also chided Red Bull 'driver advisor' Helmut Marko, a man who seldom strays far from a microphone these days, and who had openly questioned Norris's "mental strength" on account of Lando's vocal advocacy of mindfulness issues. Mental health, said Zak, was a "serious issue" and he felt Marko's remarks were "disappointing" and

in "poor taste". When given the opportunity to respond, RBR team boss Christian Horner reminded us of the FIA's recent need to clip McLaren's rear wing... Punch and counterpunch.

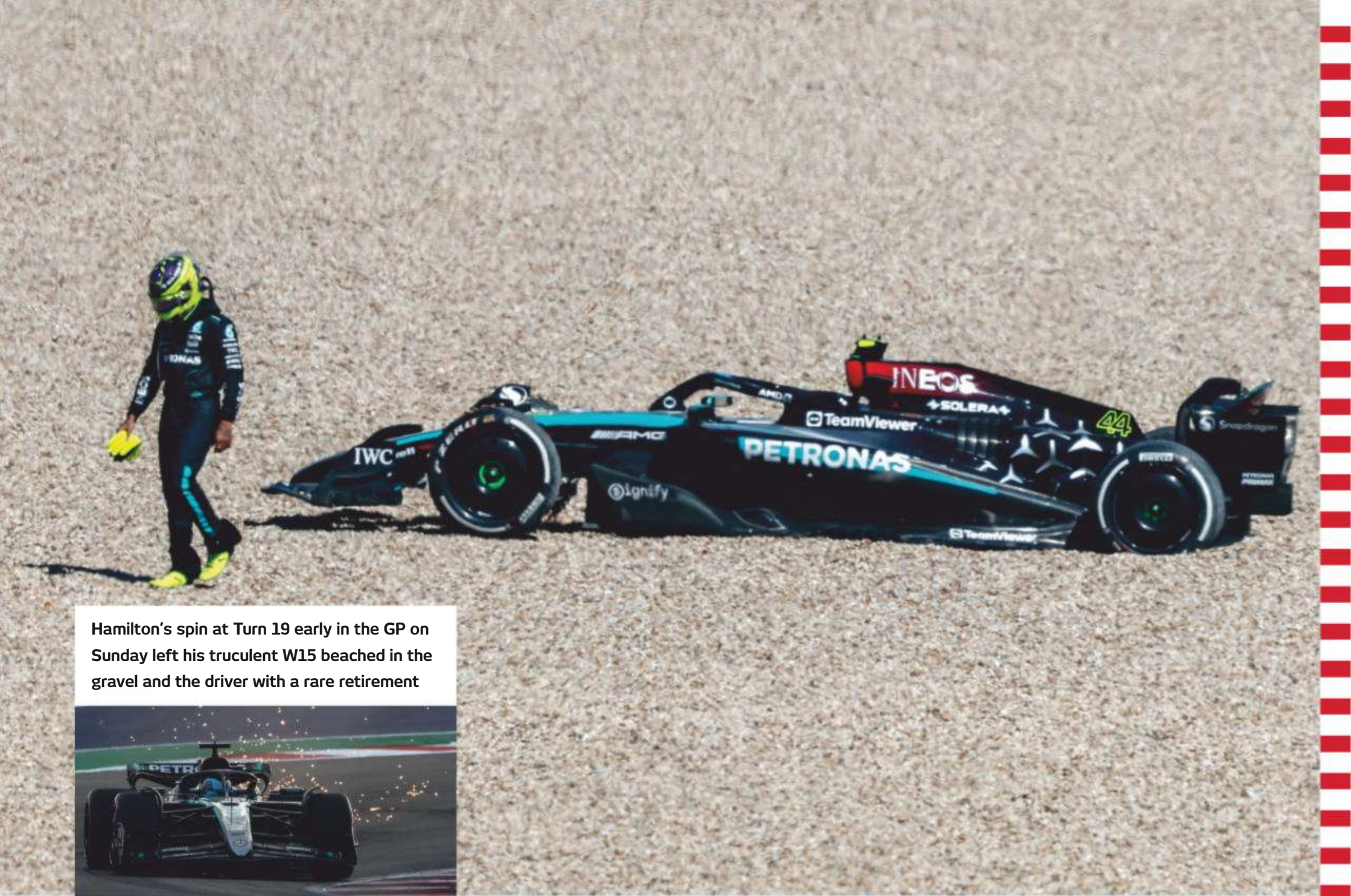
With this bout of handbags seemingly in the rear-view mirror, at the start of the race the drama began afresh. The two championship rivals lined up alongside each other on the front row with Norris on pole. Heading into Big Red (Turn 1) for the first time, Verstappen went for a gap down the inside of Norris, and his acute angle of attack forced both drivers wide. Quicker than you could say *merci beaucoup*, Charles Leclerc neatly inserted his Ferrari into the gap this created, streaking away to what would be a dominant win. Team-mate Carlos Sainz then undercut Verstappen at the pitstops to give Ferrari its first 1-2 on American soil for 18 years.

But the focus of everyone's attention was the title duel. Running fourth behind Leclerc, Verstappen and Sainz early on, Norris managed his tyres so as to delay his stop and build an offset for later in what had become a one-stop race thanks to an early Safety Car (see panel 2) and tighter restrictions on setup changes during sprint weekends.

Having complained of persistent understeer Max stopped on lap 25, four later than Sainz, which left the Red Bull third. Norris finally came in for

The first-lap, first-corner incident that saw the title protagonists lose out to Leclerc's Ferrari





Hamilton's spin at Turn 19 early in the GP on Sunday left his truculent W15 beached in the gravel and the driver with a rare retirement



After a similar spin to Hamilton in qualifying, Russell turned a pitlane start on Sunday to sixth, despite a contentious penalty

hard-compound Pirellis on lap 31 – but getting past Verstappen, even with a faster car, was a different proposition altogether. On lap 34, Norris was 6.4s behind the Red Bull and, by lap 44, he was within DRS range. Over the next 10 laps we were treated to a masterclass of defensive driving from Max as Lando tried in vain to find a way past.

Finally, on lap 52 of 56, Norris got a run down the back straight. Verstappen defended the inside, braking into Turn 12. Norris went to the outside and briefly nosed ahead but, as they rounded the corner, Lando ran out of track. Max was also off the course, but Lando continued to overtake the Red Bull.

“He needs to give it back,” yelled Verstappen. Norris didn’t. And despite pulling out a four-second gap, was demoted behind the Red Bull in the final classification. The stewards deemed Lando’s front axle had been behind Verstappen’s at the apex (a point later contested by McLaren), which is the key test according to the latest guidelines, thus a five-second penalty was applied.

Crucially for the controversy to come, not only was the judgement regarding axle position factually dubious, the penalty was issued in-race without representatives from either team present. After the race McLaren team principal Andrea Stella said the stewards had “interfered with a beautiful piece of

motorsport” in a way that was “inappropriate”.

While it’s inarguable that Norris overtook while off the track, it was also clear from telemetry that Max had come off the brakes and put him there. The dispute over stewarding rumbled on to the following weekend, though Norris summed up the sentiments of many drivers: “Max defends by going off-track, he overtakes by going off-track... But I’m not going to complain. Max drove well and he defended well. We had a good race together... but the rules are the rules.”

2 Mercedes gets in a spin

You can virtually count the number of race-ending mistakes Lewis Hamilton has made in his F1 career, where no other car was involved, on one hand. So it was a major surprise when, on lap 2, he entered the high-speed, downhill left-hander at Turn 19 and his Mercedes unexpectedly suffered a wicked snap of oversteer, sending him spinning into the gravel.

Before his early exit on race day, Hamilton had also suffered a high-speed pirouette entering the Turn 3 Esses during the sole free practice session on Friday. The seven-time world champion doesn’t make these types of errors, so the finger of blame naturally alighted on the the car. The W15 had been fitted with a raft of upgrades, including a revised

front wing, front suspension and new floor fences, but team boss Toto Wolff suggested the bumpy nature of the circuit was the issue.

Nevertheless, in qualifying, George Russell had also gyrated at Turn 19, but with slightly more serious consequences. His Mercedes made contact with the tyre wall and required extensive repair work overnight. As it happened, he reverted to a previous specification (including a floor last used before the summer break) and had few problems – except with the stewards – converting a pitlane start to sixth place on race day.

“To end up P6 ahead of a Red Bull [a lacklustre Sergio Pérez] as well was really great,” said Russell. “You always question what could have been, but we’re dealing with a difficult car at the moment. Lewis never really makes any mistakes and you saw he had the exact same thing as happened to me yesterday. That’s the beast we’re dealing with.”

The first Safety Car since Montréal was deployed to recover Hamilton’s car and, on the restart, Russell passed Valtteri Bottas into Turn 12. But as he took his line, the Sauber took to the run-off – much like Max did with Lando – and to his consternation, George was struck with a five-second time penalty.

It prompted a radio interjection from Toto Wolff: “Total joke with the penalty,” he proclaimed. “Total joke.” Afterwards, Toto used stronger language, calling it “bias decision-making,” while lambasting “inconsistent, odd and bizarre penalties.” ▶



FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 19

3 Liam Lawson has entered the chat

Following the ignominious end to Daniel Ricciardo's F1 career, which RB boss Laurent Mekies admitted with hindsight was badly handled in Singapore, fresh-faced Liam Lawson was drafted in to try to halt RB's slide down the constructors' standings.

Lawson was keen to make a point, but after the sprint race on Saturday lunchtime (won by Max Verstappen), it was Fernando Alonso who was making a point to the Kiwi. On the team radio he described the "AlphaTauri" (sic) as an "idiot." He then confronted the new boy in parc fermé. Lawson had resolutely defended his position on the long back straight, a move Alonso might have been haunted by from when he rode up the rear of Lance Stroll, a year before they were team-mates.

Pictures of the pair in conversation were reminiscent of the dressing-down Ayrton Senna gave Michael Schumacher at Magny-Cours in 1992. Undaunted, Lawson ignored Alonso's unfriendly tactics in qualifying and motored past the Aston in the race. Serving power unit penalties equivalent to 60 places he started last, on the hard Pirellis.

Sensible tyre management meant Lawson emerged from his only stop ahead of team-mate Yuki Tsunoda. So shocked was Tsunoda by this turn of events that he spun at Turn 1. First job accomplished. Lawson finished ninth, five places ahead of Yuki to score RB's first points since Spa. His next job is to convince Red Bull he is the driver it needs to bolster its faltering constructors' score.

RB's two points weren't enough to stop it slipping behind Haas in the table. The US-based team secured its best home result, taking seven points. Both cars were in the top eight in the sprint, while Nico Hülkenberg was eighth in the main event.

4 Resurgent Maranello gets flexible

Ferrari's first one-two in the United States GP since 2006 – and a strong performance in the sprint – raised hopes in Maranello that a late bid for the constructors' title could be in prospect. The scarlet cars left Austin just eight points behind Red Bull and 48 off top-placed McLaren.

Given the emphasis on the squabble for the



Lawson and Alonso 'discuss' what happened in the sprint race after Fernando had made his displeasure with Liam known over team radio

PICTURES: STEVEN TEE; ZAK MAUGER; ANDY HONE; SIMON GALLOWAY



Leclerc's victory, and Ferrari's first one-two in the US GP since 2006, went somewhat under the radar due to the title battle machinations



Franco Colapinto's impressive start in F1 continued in Austin and he was set to add the point for fastest lap until Alpine intervened

drivers' crown, grand prix winner Charles Leclerc was acutely aware that he wasn't the main focus in Austin. "I won't take it personally that I wasn't featured much in that race," he joked afterwards.

Unlike its rivals, Ferrari arrived with no upgrades – at least according to the public submissions now required by the FIA. But team boss Frédéric Vasseur made reference more than once to a new front wing. The widespread interpretation of this was that, since 'new' parts only have to be declared if their external geometries are different, this new wing was the same shape but lighter and/or more aero-elastic than the previous one.

Ferrari clearly had the pace on both the medium and hard compounds, while also not suffering a drop-off in performance. Sainz had the measure of Leclerc in the sprint but on Sunday it was Charles

who was comfortable out front.

"We've got to target winning the constructors' title," said Leclerc, who turned 27 the week before the race. "It's an optimistic goal, but that's what we're here for. If we do everything perfect until the end of the season, no matter what McLaren does, I think we can still clinch that title."

5 Whose fastest lap is it anyway?

In the lead-up to the USGP, the FIA announced that the bonus point for fastest lap (only awarded to those in the top ten) will be dropped from next year. Since being reintroduced in 2019 after a 60-year absence, it has been arguably meaningless as a signifier of who is actually the fastest driver, since anyone with a fresh set of softer tyres available and has enough space on track for a 'free' pitstop (or is running outside the top 10 so losing track position is irrelevant) can achieve that point – or steal it from someone.

That's exactly what happened in Austin, where Williams's Franco Colapinto, after an impressive performance which earned him a point for 10th place, was set to collect another for the fastest lap – until it was taken from him. The team's nearest challenger in the constructors' championship, Alpine, called in Esteban Ocon (who ultimately finished 18th) and fitted him with soft tyres so he could set his first fastest lap in F1.

On social media, Ocon wrote: "Sorry to Franco – he deserved it."

There are others who might find the idea of being the fastest over a single race lap irrelevant. 15th-placed Lance Stroll has now overtaken Johnny Herbert as the driver who has the most starts in F1 (161) without ever setting a fastest lap.

RESULTS ROUND 19

CIRCUIT OF THE AMERICAS

20.10.24 / 56 LAPS



1st	Charles Leclerc	Ferrari	1h35m09.639s
2nd	Carlos Sainz	Ferrari	+8.562s
3rd	Max Verstappen	Red Bull	+19.412s
4th	Lando Norris	McLaren	+20.354s*
5th	Oscar Piastri	McLaren	+21.921s
6th	George Russell	Mercedes	+56.295s
7th	Sergio Pérez	Red Bull	+59.072s
8th	Nico Hülkenberg	Haas	+62.957s
9th	Liam Lawson	RB	+70.563s
10th	Franco Colapinto	Williams	+71.979s
11th	Kevin Magnussen	Haas	+79.782s
12th	Pierre Gasly	Alpine	+90.558s*
13th	Fernando Alonso	Aston Martin	+1 lap
14th	Yuki Tsunoda	RB	+1 lap**
15th	Lance Stroll	Aston Martin	+1 lap
16th	Alex Albon	Williams	+1 lap
17th	Valtteri Bottas	Stake	+1 lap
18th	Esteban Ocon	Alpine	+1 lap
19th	Zhou Guanyu	Stake	+1 lap

Retirements		
Lewis Hamilton	Mercedes	1 lap/spin

Fastest lap	
Esteban Ocon	1m37.330s on lap 53

F1 Sprint – 19 laps		
1st	Verstappen	2nd Sainz 3rd Norris
4th	Leclerc	5th Russell 6th Hamilton
7th	Magnussen	8th Hülkenberg

TYRE COMPOUNDS USED				
Hard (C2)	Medium (C3)	Soft (C4)	Inter	Wet

CLIMATE	AIR TEMP	TRACK TEMP
Sunny	29°C	43°C

DRIVERS' STANDINGS		12 Tsunoda	22pts
1 Verstappen	354pts	13 Albon	12pts
2 Norris	297pts	14 Ricciardo	12pts
3 Leclerc	275pts	15 Magnussen	8pts
4 Piastri	247pts	16 Gasly	8pts
5 Sainz	215pts	17 Bearman	7pts
6 Hamilton	177pts	18 Colapinto	5pts
7 Russell	167pts	19 Ocon	5pts
8 Pérez	150pts	20 Lawson	2pts
9 Alonso	62pts	21 Guanyu	0pts
10 Hülkenberg	29pts	22 Sargeant	0pts
11 Stroll	24pts	23 Bottas	0pts

*includes 5s penalty for leaving the track and gaining an advantage
**includes 5s penalty for forcing another driver off the track





FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 20

THE MEXICO CITY GP IN 5 KEY MOMENTS

REPORT BY JAMES ROBERTS



1 Max crosses a line in title defence

Seven days on from the US GP, Lando Norris and Max Verstappen's on-track behaviour was again under scrutiny as the pair continued their fight in the high altitude of Mexico City. This time, it was the championship leader who accrued two 10-second penalties for his car positioning and control.

The post-Austin brouhaha (see p16) provided further emphasis of the flaws in the current guidelines the stewards work from, which will be urgently revised in consultation with the drivers ahead of the Qatar GP. Chiefly the question of which driver is overtaking and who is being overtaken being defined by the position of the front axle line at the apex is too easy to exploit. One driver or the other can over-commit to the corner with no hope of making it round, but then cry foul.

Despite qualifying second to Ferrari's Carlos Sainz, Verstappen was a man under pressure in Mexico – and not just because of the brickbats being lobbed his way over driving standards. Throughout practice Max was dogged by engine problems and, in common with the rest of the grid, his FP2 was disrupted by the Pirelli tyre-test requirements. In the absence of an obvious fix for the power unit, Red Bull installed an older one with

Max is clearly under pressure on two fronts: questions over his driving standards and the now obvious lack of speed in his Red Bull



Verstappen beat Sainz into Turn 1 to take the lead, only for the Spaniard to retake the spot when the race resumed after a Safety Car

more mileage on the clock – and its age manifested itself in lower velocities through the speed trap. Max also complained about balance and grip.

Still, Max was fast enough into Turn 1 that Sainz had to abandon the corner and run over the grass, giving up the lead. He retook it with a move at the same corner when the race was green-flagged after an early Safety Car period (see over the page), leaving Max in second – and raging on the radio about the feebleness of his available engine modes – with Norris and Charles Leclerc in pursuit.

The defining moments of the race came on lap 10. Firstly Norris closed in under DRS between Turns 3 and 4, braking late in an ambitious move around the outside at Turn 4. Max also tried to run as deep as possible but had to avoid running into race leader Carlos Sainz. Although Verstappen still ran the McLaren wide, and off the track, Norris emerged from the grass in the lead. While he quickly moved over for Sainz, he didn't let Max by.

The perceived injustice of this – as viewed through the optics of Team Verstappen – might account for what happened next, which can objectively be described as a moment of madness. At the entry to the sweeping left-right of Turns 7-8 Max dived up the inside, taking both himself and Norris off the circuit as Leclerc seized the moment to snatch second. Luckily both continued, but it was only a matter of time before Max received a firm rap on the knuckles. This arrived in the form of two 10-second penalties – one because Norris's front axle line was adjudged to have been ahead at Turn 4 and he would have passed "in a safe and controlled manner" if he hadn't been pushed off, the other because Max, while ahead at the apex of Turn 7, was going too fast to complete the pass and went off, forcing Norris to follow suit. He then failed to give the position back, falling foul of the proviso in the International Sporting Code which states a driver must not derive a "lasting advantage" when rejoining the track.

Why 10s and not 5s, as per Norris in Austin? The FIA confirmed that 10s is the standard tariff and that the Austin stewards had only penalised Norris 5s because of the “mitigating circumstances” of Verstappen’s on-the-limit defence there.

The paths of the two drivers then diverged as Max laboured to sixth place in his compromised car (another lap or two and Kevin Magnussen’s Haas would have been on his tail). In his second stint Norris caught Leclerc and passed him when Charles was held up behind Lance Stroll in the stadium section while coming up to lap the Aston Martin. Second place meant a net gain of 10 places in the drivers’ championship.

Responses to the lap 10 fracas were naturally skewed by differing perspectives. McLaren CEO Zak Brown said the penalties didn’t go far enough. Red Bull team principal Christian Horner described them as “harsh”. The view of the neutrals is perhaps best summed up by George Russell, a GPDA director, who said of the first incident “you could argue it was 60/40” but likened the second to the incident between Max and Lewis Hamilton in Brazil in 2021.

Horner also convened a press conference in which he produced some telemetry traces culled from the internet – seriously – as evidence that Norris was 15km/h faster in the braking zone of Turn 4 on Lap 10 than he was when he set the fastest lap later in the race. While largely accurate – it was actually 14km/h – Horner’s argument failed to take into account the fact that Norris had Max’s slipstream and DRS on lap 10, but was in clear air at that point on his fastest lap...

2 Disappointing Pérez is top of the flops

Red Bull left Mexico having slipped to third in the constructors’ standings. It was another disappointing weekend for the team that has been so dominant in the new ground-effect era. And once again Sergio Pérez came under the spotlight as, despite holding a contract for a race seat next year, speculation continued to mount that management are tiring of his error-strewn performances.

Pérez was refreshingly frank when he spoke of a “terrible” season in the Thursday press conference but, if he was hoping for a change of fortune in

front of his home fans, it did not come to pass. Complaining of brake issues affecting stability across the rear axle, he was 0.8s slower than Verstappen in Q1 and failed to progress, leaving him 18th on the grid.

Then, despite the adulation from the massive Mexican fan base, race day was even worse. It was a grand prix of three thirds for Pérez and only one of them was reasonably good on balance. He advanced five places with an excellent start and looked strong at the beginning of his first stint even though he was on hard tyres with a view to running long – but he had overshot his allocated grid ‘box’ and picked up a five-second penalty.

Pérez then became embroiled in an unnecessarily physical scrap with RB’s Liam Lawson. Since the young Kiwi is the driver widely tipped to be on pole position to replace Checo, there was an added frisson to their on-track encounter, during which Pérez picked up floor and sidepod damage. This forced him into the pits early – on lap 20 of 71 – and thereby inking in at least one more stop for fresh mediums.

When Lawson broke his own wing late in the race after contact with Franco Colapinto’s Williams, debris littered the track on the approach to the Foro Sol stadium section. Over team radio, Pérez speculated on the culprit: “I’m guessing it’s the same idiot that crashed into me?” When Lawson later repassed the home hero, he did so while showing him his middle finger, further intensifying the animosity between the two drivers.

Ahead of the final lap Pérez made a third stop, ▶



Sergio Pérez has a Red Bull contract for 2025 but in Mexico he became embroiled with the man who could replace him: Liam Lawson





FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 20



for soft tyres, in an unsuccessful attempt to claim the fastest lap and block rivals from scoring an additional point. He ended the race as the last classified finisher.

3 Dominant Sainz wins from pole position

Four races before his Ferrari journey comes to an end, Carlos Sainz delivered one of his best performances for the Maranello-based team, if not of his entire career. His victory was only Ferrari's third triumph in Mexico (although not many people remember the Scuderia skipped the 1966 edition of this race entirely) following wins by Jacky Ickx in 1970 and Alain Prost in 1990.

In qualifying, Sainz delivered two laps that were good enough for pole using a technique he admitted he'd seen Lando Norris use before, which

Sainz photobombs McLaren's celebrations. For the second race running a winning Ferrari driver wasn't the main story on Sunday...

has its origins in online racing. Coming out of the last corner, he moved away from the natural racing line and hugged the pitwall to reduce the distance to the finish line. Team-mate Charles Leclerc struggled to match Sainz's lap times since his more aggressive style tends to overheat the rear tyres at this track – plus his preparation had been compromised by missing FP1 so that Oliver Bearman could perform the team's FIA-mandated young-driver run, along with FP2 being given over to the Pirelli 2025 tyre test.

During Thursday's technical "show and tell", senior engineer Jock Clear explained how Ferrari's focus has been to rebalance its car's performance towards race pace, so the drivers could approach Sundays confident of making progress rather than fretting about having to desperately hang on to



position. Sainz's poise was demonstrated on lap one when he didn't lose his head after running wide at the first corner, then took Max Verstappen by surprise with a late but clean lunge to retake the lead after the early Safety Car deployment.

Although Norris's race pace forced both Ferraris to push harder than they would have preferred, Sainz ran relatively unruffled to the flag. Running in dirtier air because of late-race lapped traffic, Leclerc struggled with brake temperatures and the enforced lift-and-coast left him vulnerable to Norris. On lap 63 he ran wide out of the final corner and it took every ounce of his prodigious skill to prevent his Ferrari smiting the wall. Unfortunately Leclerc's verbal dexterity isn't quite on par with his car control; inadvertently dropping the F-bomb while recounting the incident in the post-race press conference put him at risk of joining Max in community service.

4 Mercedes' complicated specs life

It's not news that Mercedes has struggled to return to peak competitiveness in the ground-effect era. Ahead of the 2024 season run-in another challenge has entered the mix: availability of new parts. After a spate of costly accidents in recent races, Mercedes is having to ration development components and fall back on inventory because of the cost cap.

The inconsistent behaviour of the W15 at low ride heights remains problematic for both drivers – telemetry revealed that Lewis Hamilton's race-ending spin at Austin was prompted by his car bouncing so much it was running on three wheels. In Mexico, George Russell had a substantial smash when his car stepped out after hitting a kerb in FP2 – George reckoned he'd taken that kerb identically over the four preceding laps.

After taking P6 in qualifying, Hamilton noted that his W15 had changed in balance from FP3. "It was

PICTURES: STEVEN TEE; MARK SUTTON; ANDY HONE



like it flipped its head,” he said. “It’s a very strange thing with the car. We have three-wheeling and the ride height is moving 15mm up and down and when it does that, it shits the bed basically.”

Despite having to revert to a floor he last used in Miami, Russell qualified P5, just a tenth off Charles Leclerc. The Mercedes drivers then fought over fifth, and then fourth after Verstappen’s penalties, for most of the race. Lewis had misread the conditions and taken off too much front wing, giving him understeer in his first stint which enabled Russell to repass after losing out at Turn 1, but an adjustment at the stops gave Lewis the car to attack and pass his team-mate in the final laps.

5

Testing times for Tsunoda

Yuki Tsunoda has finally got the nod to test a Red Bull car at the end of the season but he did

Russell and Hamilton battled for position for most of the race, with Lewis able to grab fourth from George for good on lap 66

little in Mexico to make a case for a race seat alongside Max Verstappen next year. On Saturday he outbraked himself and slid into the barriers approaching the Foro Sol stadium at the end of Q2. Not only did this incident eliminate him from progressing into Q3, the ensuing red flag prevented his new team-mate, Liam Lawson, from reaching the final part of qualifying as well.

Perhaps eager to make up for this disappointment, on Sunday Tsunoda was super-aggressive on the run to Turn 1, momentarily putting two wheels on the grass, and was spun into the wall as Pierre Gasly inadvertently squeezed Alex Albon into him. The incident triggered a long Safety Car period. You can bet that Yuki’s swathe of incidents – coinciding with the arrival of Lawson – haven’t gone unnoticed by the all-seeing eye of Dr Helmut Marko...

He’s finally got a Red Bull test but Tsunoda’s first-lap incident and qualifying off won’t have impressed bosses at the senior team



RESULTS ROUND 20

AUTÓDROMO HERMANOS RODRÍGUEZ /
27.10.24 / 71 LAPS



1st	Carlos Sainz	Ferrari	1h40m55.800s
2nd	Lando Norris	McLaren	+4.705s
3rd	Charles Leclerc	Ferrari	+34.387s
4th	Lewis Hamilton	Mercedes	+44.780s
5th	George Russell	Mercedes	+48.536s
6th	Max Verstappen	Red Bull	+59.558s
7th	Kevin Magnussen	Haas	+63.642s
8th	Oscar Piastri	McLaren	+64.928s
9th	Nico Hülkenberg	Haas	+1 lap
10th	Pierre Gasly	Alpine	+1 lap
11th	Lance Stroll	Aston Martin	+1 lap
12th	Franco Colapinto	Williams	+1 lap
13th	Esteban Ocon	Alpine	+1 lap
14th	Valtteri Bottas	Stake	+1 lap
15th	Zhou Guanyu	Stake	+1 lap
16th	Liam Lawson	RB	+1 lap
17th	Sergio Pérez	Red Bull	+1 lap

Retirements			
Fernando Alonso	Aston Martin	15 laps/brake cooling	
Alex Albon	Williams	0 laps/collision	
Yuki Tsunoda	RB	0 laps/collision	

Fastest lap	
Charles Leclerc	1m18.336s on lap 71

TYRE COMPOUNDS USED

Hard (C3) Medium (C4) Soft (C5) Inter Wet

CLIMATE	AIR TEMP	TRACK TEMP
Cloudy	20°C	34°C

DRIVERS' STANDINGS

1	Verstappen	362pts	11	Stroll	24pts
2	Norris	315pts	12	Tsunoda	22pts
3	Leclerc	291pts	13	Magnussen	14pts
4	Piastri	251pts	14	Albon	12pts
5	Sainz	240pts	15	Ricciardo	12pts
6	Hamilton	189pts	16	Gasly	9pts
7	Russell	177pts	17	Bearman	7pts
8	Pérez	150pts	18	Colapinto	5pts
9	Alonso	62pts	19	Ocon	5pts
10	Hülkenberg	31pts	20	Lawson	2pts
			21	Guanyu	0pts
			22	Sargeant	0pts
			23	Bottas	0pts







FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 21

THE SÃO PAULO GP IN 5 KEY MOMENTS

REPORT BY JAMES ROBERTS

Verstappen ended his run of winless races at just the right time with a stunning victory in Brazil to move closer to a fourth title



1 Heaven from 17th for Max

It's difficult to find enough superlatives to describe Max Verstappen's performance in the São Paulo Grand Prix. Given his frustration on race day morning, it would have been all too easy to let his emotions get the better of him and slip off the rain-soaked Interlagos track. As Max digested the prospect of starting from 17th on the grid, with title rival Lando Norris on pole, his mood – and that of the Red Bull team – was one of exasperation. After a slew of penalties from the stewards in recent races (including a five-second VSC infringement in

Saturday's sprint), they publicly questioned Race Control's officiating in qualifying.

Yet, in the face of these odds, Verstappen showed precisely why he is on the brink of joining Alain Prost and Sebastian Vettel as a four-time Formula 1 world champion. He responded to the perceived injustices with a stunning, assertive drive in the 69-lap São Paulo GP. Effortlessly cutting through traffic and positioning his car flawlessly, he thrived in foul conditions that sent many other drivers gyrating off track.

Max's first win in 11 races marked the 62nd of his career – and arguably one of his finest. At the start of a wet São Paulo Sunday, it seemed Norris might finally cut substantially into Verstappen's points lead. By the time the chequered flag fell, Norris's

hopes were evaporating – while Max could clinch the title in Las Vegas.

Verstappen entered the weekend knowing he'd face a five-place grid penalty for a new power unit. At a venue where overtaking is achievable, though, this was considered a manageable setback – although McLaren reasserted its dominance in the dry running of the first day and a half on the freshly resurfaced (but still bumpy) circuit. Finishing fourth in the sprint as Norris won – cue another three-point shift in the McLaren driver's favour – provided further reasons to be cheerless.

When a storm drenched the Autódromo José Carlos Pace on Saturday afternoon the stakes were raised. Qualifying was pushed back until the light faded and the FIA, given the forecast for more rain on race day, had no other option but to rearrange it for Sunday morning at 7:30am local time and bring forward the start of the race by two hours to 12:30pm. That meant a very early alarm call for the crews, who were already feeling the effects of the gruelling triple-header.

In qualifying Lance Stroll crashed his Aston exiting Turn 3 at the end of Q2. Race control initially opted to cover this with waved yellows, letting the cars running ahead (including Norris) complete their flying laps, while Stroll attempted to reverse out of the barriers. Running behind him on track, Max had to slow due to those yellows and the subsequent red flag denied him another chance to set a lap. That left him 12th – which became 17th after his penalty. Cue Jos Verstappen thumping the garage countertop in annoyance and Max describing the delay in red-flagging the session as "ridiculous".

The weather continued to be unfriendly but the race would have got going on time but for Stroll causing chaos again with another shunt, this time on the way to the grid. Nerves got the better of Norris and fellow front-row starter George Russell and they set off on another formation lap, followed by 11 other cars, earning themselves a €5000 fine each for breaking the rules.

But Verstappen, to quote a certain other world champion, knew what he was doing. At the race start proper, Max passed four cars – including his own team-mate – before Turn 3 vanished into a ball of spray in his rear-view mirror. A net gain of six places, factoring in the absences of Stroll and Alex Albon. In subsequent laps he nailed Lewis Hamilton and Pierre Gasly with surefooted moves up the inside line into the Senna 'S', passed Fernando Alonso into Turn 4, and made short work of Oscar Piastri in the second McLaren. Liam Lawson, knowing what was good for him,

offered little resistance. Only Charles Leclerc held out, defending fifth until Ferrari called him in for replacement intermediates.

The timing of the pitstops would prove crucial since a band of heavier rain manifested itself just as the first sets of tyres were wearing out. Drizzle became semi-downpour. Teams began to fret about releasing their drivers into traffic – Leclerc’s cold inters had put him behind Hamilton in 10th – while Verstappen chased down Esteban Ocon and Yuki Tsunoda, who had starred in wet qualifying and were now running behind Norris and Russell. On lap 27 Nico Hülkenberg spun his Haas into the run-off at Turn 1 and Race Control decided to call a Virtual Safety Car – by which point the leading duo had clocked up a 28th lap and were passing Turn 3. No ‘free’ pitstop for them.

A slew of other cars did stop immediately, including Sergio Pérez, who finally made himself useful. As team boss Christian Horner explained later, the tyres which came off Checo’s car “were in very good shape so that’s why we elected not to pit [Max] for a new set of inters and go longer”. This was a turning point in the race, because Norris and Russell *did* pit, losing track position, then the Safety Car was deployed (owing to the poor visibility, according to Pirelli’s post-race briefing), followed by a red flag when Franco Colapinto binned his Williams at Turn 14.

Verstappen’s Q2 exit meant he had a set of new intermediates at his disposal while his chief rivals

only had worn ones. More importantly the red flag enabled him to take them without pitting. When the race was restarted he only had Ocon in front of him – and, while Ocon aced the first restart and pulled away, another course neutralisation bunched the pack again and Max was decisive into Turn 1.

As the track gradually dried Verstappen was untouchable out front, eventually building a 19-second lead to claim victory. It was a flawless performance – a masterful response under mounting pressure.

2 Brake locking adds to Norris damage

Brazil presented Lando Norris with a prime opportunity to close the gap on Verstappen’s points lead, but it was not to be. Beaten to pole by Oscar Piastri in sprint qualifying, Lando relied on his team-mate’s largesse during the 24-lap contest on Saturday afternoon. The Australian waved Lando through so he could secure eight points for the win.

In wet Sunday-morning qualifying Norris safely navigated the five red-flag stoppages to claim the eighth pole of his career – but it was downhill from there. First came the mistake in pulling away after the aborted start. When the race got under way, Norris was beaten into Turn 1 by George Russell and he trailed the Mercedes until the VSC was

deployed on lap 28 to cover Hülkenberg’s spin.

After pitting for replacement intermediates Norris had the confidence to pass Russell through a wall of spray in the deteriorating conditions. But that only put him in a net fourth place since Esteban Ocon, Max Verstappen and Pierre Gasly stayed out and gained track position as a result of the subsequent Safety Car and red flag.

When the race resumed, Norris immediately ceded fourth back to Russell after running wide at Descida do Lago. At the next Safety Car restart – triggered by Carlos Sainz’s crash a few laps later – Norris found himself under pressure from Charles Leclerc into Turn 1 and went wide again. It looked like a capitulation to the conditions just as Verstappen was demonstrating his fluency up front.

However, McLaren team principal Andrea Stella offered another perspective, saying both drivers had been suffering with unpredictable brake locking in wet conditions. “I don’t think pressure was a significant factor at all,” he said of Norris’s two off-track moments.

“That [the brake issues] will definitely be something that we are looking into,” he continued. “It seems to appear in some conditions. I can’t really comment – I will give away some IP – but it’s a little unpredictable and for drivers, it’s also difficult to make adaptations from one lap to the other.

“It comes down to unpredictably. This is a technical opportunity for the team rather than something the drivers need to look into.” ▶

Norris's GP started badly with the aborted start and losing out to Russell when the race did get underway. And it never improved...



Lando maximised his points tally on Saturday in the sprint race, although he needed the help of McLaren team-mate Piastri to do so



FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 21



The Alpine duo of Ocon and Gasly both put in stunning performances in the wet to lift the team up to sixth in the constructors' race

3 Alpine points bounty

Although Alpine has been on an upward trajectory of late, new team principal Oliver Oakes was quick to emphasise he's only been at the team for 16 weeks and there are other factors behind the revival. Updates have propelled the team into Q3 appearances, but nobody was expecting a first double podium since Korea 2013. This result was even more remarkable considering neither Alpine driver had run a lap higher than fifth all season.

In a weekend when beleaguered mechanics, especially those at Williams and Aston Martin, were repairing damaged cars, Alpine's crew had an easy time. They didn't even need to perform a pitstop in race conditions, since both drivers stayed out when conditions worsened and were rewarded with a 'free' tyre change under the red flag.

Esteban Ocon and Pierre Gasly shared an F1 podium for the first time in their careers, earning 35 points for the team – tripling its points for the season. This lifted Alpine from ninth to sixth in the standings – a leap aided by a disastrous day for

Hamilton found his Mercedes W15 a handful in Brazil but he did get to sample Ayrton Senna's McLaren MP4/5 for a few laps on Sunday



Alonso had a disappointing time in Brazil. He arrived late for medical reasons and struggled with the bumps on the resurfaced track



PICTURES: STEVEN TEE; ZAK MAUGER; LUBOMIR ASENOV



It was almost like a home race for Colapinto, such were the numbers of Argentinians at Interlagos, and they were very, very vocal...

Williams and an off-form weekend for Haas.

Only one Williams started the race and neither finished it, while in the Haas corner Nico Hülkenberg became the first driver since Canada 2007 to be shown the black flag, after receiving outside assistance from the marshals following his spin. Oliver Bearman substituted for an unwell Kevin Magnussen but was driving an F1 car in the wet for the first time and had a scrappy race as a result.

“On a day like today, even when the car has misbehaved for the majority of the season, everyone tried to [bring their] A-game,” said Gasly. “I’m very proud for everyone working in the team.”

4

Greats with few expectations

On social media, both Lewis Hamilton and Fernando Alonso congratulated Max Verstappen on his stellar performance – a stark contrast to their own weekends. Alonso’s arrival in Brazil was delayed after he’d flown back to Europe for medical treatment due to an intestinal infection.

The 43-year-old then shunted in qualifying, leaving his Aston mechanics to scramble to get his car ready for the race. In common with several drivers he was unimpressed with the bumpiness of the new surface and, during the second restart behind the Safety Car, spun at Junção and fell way off the back of the field. Although he ate up the gap and began to make up positions he was out of the points, but said on the radio: “I will finish the race for the mechanics. They did a very good job today. But my back is hurting. This bouncing is not normal.”

After the race Alonso referenced the severe floods that had struck his home country. “It was not comfortable in the car,” he said. “But there are people worse than me, also in Valencia, we have

these terrible images and people struggling. So I had to struggle a couple of laps for everybody.”

Hamilton claimed the final point, but he too was grappling with the rough ride of his W15 on the bumps. “Yesterday was terrible, today was terrible. The car’s been bad all weekend,” he admitted, glum-faced. Mercedes also faced two €5,000 fines after adjusting tyre pressures on both cars, once the wheels were already fitted during the aborted start.

There was a bright spot for Lewis: he returned to a McLaren cockpit after qualifying to complete a few laps in Ayrton Senna’s MP4/5.

5

Colapinto has Argentina fired up

While the rivalry often runs deep between Brazil and Argentina, particularly in football, Interlagos was filled with passionate Argentine fans cheering on their latest hero: Franco Colapinto. Although Lionel Messi still reigns supreme in their footballing hearts, Colapinto has quickly established himself as one of the nation’s rising sports stars.

Williams, however, endured a difficult Sunday, despite showing promise in the wet conditions during qualifying. Alex Albon looked poised for a strong Q3 appearance until he lost control under braking for the first corner, causing damage that couldn’t be repaired in time for the race.

Colapinto also endured a rough day, crashing in qualifying with a spin at Turn 3, before another costly impact on the ascent to the start/finish line – this time while running behind the Safety Car, which led to the race-halting red flag.

“The nature of F1 is that you can have some of the most incredible feelings and results, as well as some of the lowest moments,” said Williams boss James Vowles. “This is the second of those two.”

RESULTS ROUND 21

AUTÓDROMO JOSÉ CARLOS PACE

03.11.24 / 69 LAPS




1st	Max Verstappen	Red Bull	2h06m54.430s
2nd	Esteban Ocon	Alpine	+19.477s
3rd	Pierre Gasly	Alpine	+22.532s
4th	George Russell	Mercedes	+23.265s
5th	Charles Leclerc	Ferrari	+30.177s
6th	Lando Norris	McLaren	+31.372s
7th	Yuki Tsunoda	RB	+42.056s
8th	Oscar Piastri	McLaren	+44.943s*
9th	Liam Lawson	RB	+50.452s
10th	Lewis Hamilton	Mercedes	+50.753s
11th	Sergio Pérez	Red Bull	+51.531s
12th	Oliver Bearman	Haas	+57.085s
13th	Valtteri Bottas	Stake	+63.588s
14th	Fernando Alonso	Aston Martin	+78.049s
15th	Zhou Guanyu	Stake	+79.649s

Retirements			
Carlos Sainz	Ferrari	38 laps/accident	
Franco Colapinto	Williams	30 laps/accident	
Alex Albon	Williams	DNS/accident damage	
Lance Stroll	Aston Martin	DNS/accident	
Nico Hülkenberg	Haas	DSQ**	

Fastest lap
Max Verstappen 1m20.472s on lap 67

F1 Sprint – 24 laps			
1st	Norris	2nd	Piastri
3rd	Leclerc	4th	Verstappen
5th	Sainz	6th	Russell
7th	Gasly	8th	Pérez

TYRE COMPOUNDS USED



Hard (C3) Medium (C4) Soft (C5) Inter Wet

CLIMATE	AIR TEMP	TRACK TEMP
Wet	23°C	43°C

DRIVERS’ STANDINGS			
1	Verstappen	393pts	12 Gasly 26pts
2	Norris	331pts	13 Stroll 24pts
3	Leclerc	307pts	14 Ocon 23pts
4	Piastri	262pts	15 Magnussen 14pts
5	Sainz	244pts	16 Albon 12pts
6	Russell	192pts	17 Ricciardo 12pts
7	Hamilton	190pts	18 Bearman 7pts
8	Pérez	151pts	19 Colapinto 5pts
9	Alonso	62pts	20 Lawson 4pts
10	Hülkenberg	31pts	21 Guanyu 0pts
11	Tsunoda	28pts	22 Sargeant 0pts
			23 Bottas 0pts



FINISHING STRAIGHT

RACE PREVIEW

F1 WORLD CHAMPIONSHIP ROUND 22

LAS VEGAS GP

21-23 November 2024
Las Vegas

PICTURES: MARK SUTTON; NDY HONE; ILLUSTRATION: ALAN ELDRIDGE



RACE DATA

Circuit name Las Vegas
Strip Circuit
First grand prix 2023
Number of laps 50
Circuit length 3.85 miles
Race distance 192.60 miles
Lap record 1m35.490
Oscar Piastri (2023)
F1 races held 1
Winners from pole 0
Pirelli compounds C3, C4, C5

CAR PERFORMANCE

Downforce level Low
Cooling requirement Low
Full throttle 78%
Top speed 212mph
Average speed 148mph

TIMETABLE (UK TIME)

Friday 22 November
Practice 1 02:30-03:30
Practice 2 06:00-07:00
Saturday 23 November
Practice 3 02:30-03:30
Qualifying 06:00-07:00
Sunday 24 November
Race 06:00
Live coverage Sky Sports F1
Highlights Channel 4

THE PAST WINNER HERE



2023

Max
Verstappen
Red Bull

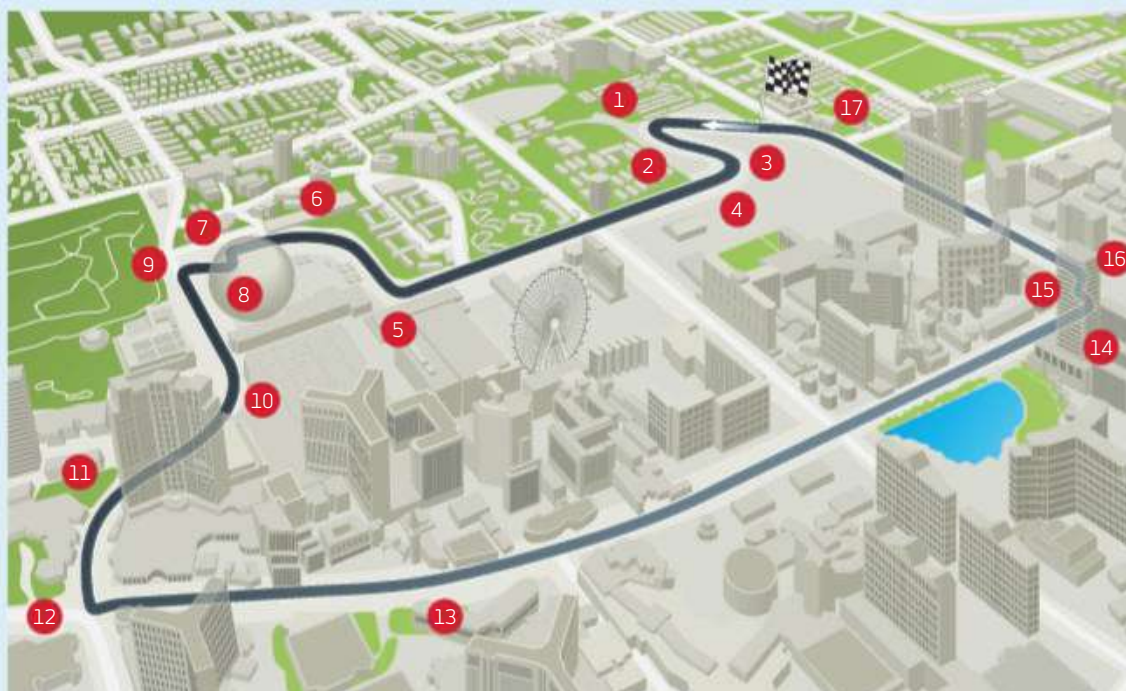
THE MAIN EVENT

Last year, the latest addition to the F1 calendar, Las Vegas, was the biggest and most exciting development in F1 history since the last US addition to the F1 calendar, Miami. We can mock, fans unable to get reasonable access because corporate hospitality was hogging the best spots can chafe, and photographers unable to find angles to differentiate this floodlit concrete-and-steel-lined circuit from Singapore can gripe, but making a race happen on the Vegas Strip was a must for F1's commercial rights holder.

Lessons have been learned, say the promoters, and there will be better transport access and (slightly) more reasonable ticket prices.

KEY CORNER: TURN 12

A slow-left hander which is vital to launching a car properly onto the long straight that follows. Don't get distracted by the pirate ship that sits outside the Treasure Island casino...



2023 RACE RECAP

Charles Leclerc qualified on pole for Ferrari, and his team-mate Carlos Sainz would have joined him on the front row but for a grid penalty (the result of fitting a new energy store to replace one broken by a loose drain cover in practice). Max Verstappen was penalised for pushing Leclerc off at the first corner but an early Safety Car enabled him to pit and serve the penalty at minimal cost.

Leclerc had pitted before the course neutralisation so Max had the advantage thereafter, while Leclerc resolved his late-race battle with Sergio Pérez with a brave dive on the last lap.

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FINISHING STRAIGHT

RACE PREVIEW

F1 WORLD CHAMPIONSHIP ROUND 23

QATAR GP

29 November-1 December 2024
Lusail International Circuit

PICTURES: ZAK MAUGER; ILLUSTRATION: ALAN ELDREDGE



RACE DATA

Venue Lusail

International Circuit

First GP 2021**Number of laps** 57**Circuit length** 3.342 miles**Race distance** 190.549 miles**Lap record** 1m24.319s

Max Verstappen (2023)

F1 races held 2**Winners from pole** 2**Pirelli compounds** C1, C2, C3

CAR PERFORMANCE

Downforce level High**Cooling requirement** Medium**Full throttle** 68%**Top speed** 199mph**Average speed** 134mph

THE MAIN EVENT

When it first joined the F1 calendar in 2021 the Lusail circuit was envisioned as a Covid placeholder, with the country taking a break in 2022 owing to hosting the football World Cup, and then beginning a 10-year deal the following season, migrating to a new purpose-built venue at some point. The reason for this was that Lusail, built to host motorcycle races, was nobody's idea of a great GP venue. There must have been an overspend on the World Cup because not long after – the 2023 Monaco GP in fact – the F1 press were summoned to a press conference on a yacht where a man with very expensively done teeth explained that, instead, Lusail was going to get a revamp.

Aside from a new surface, the circuit layout remained unchanged but visitor and worker facilities were much improved, with a new pit/paddock complex and grandstand expansions taking capacity from 8000 to 40,000.

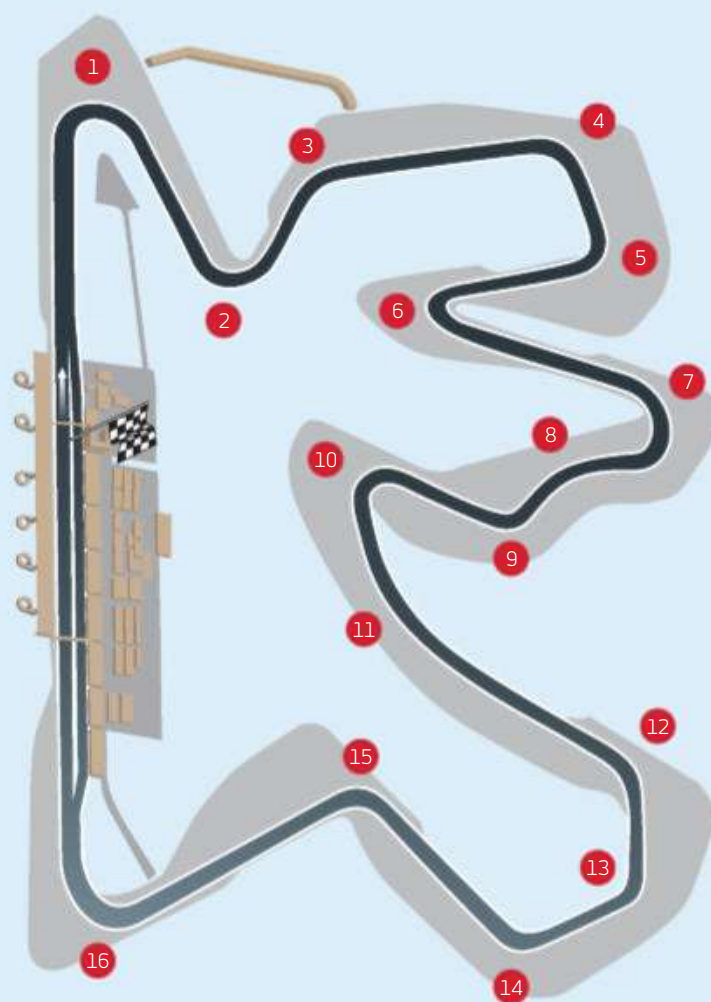
2023 RACE RECAP

An unusual weekend eventuated as high temperatures and sharp kerbs combined to force the FIA and Pirelli to impose a maximum stint length for the GP. A sprint race punctuated by Safety Cars enshrined third-placed Max Verstappen as champion when team-mate Sergio Pérez crashed out; McLaren's Oscar Piastri registered a statistically anomalous first F1 win.

Verstappen then led every lap of the GP from pole position, winning ahead of Piastri and Lando Norris. Several drivers suffered from extreme heat exhaustion, prompting the 2024 race to be moved to a month later.

KEY CORNER: TURN 1

The curving first corner is tricky to judge on the brakes and positioning is key, especially in traffic: Lewis Hamilton made an unusual mistake and hit his team-mate here last year.



TIMETABLE (UK TIME)

Friday 29 November**Practice 1** 13:30-14:30**Sprint qualifying** 17:30-18:14**Saturday** 30 November**Sprint** 14:00-14:50**Qualifying** 18:00-19:00**Sunday** 1 December**Race** 16:00**Live coverage** Sky Sports F1**Highlights** Channel 4

THE PAST WINNERS HERE



2021

Lewis
Hamilton
Mercedes

2023

Max
Verstappen
Red Bull



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FINISHING STRAIGHT

RACE PREVIEW

F1 WORLD CHAMPIONSHIP ROUND 24

ABU DHABI GP

6-8 December 2024

Yas Marina



PICTURE: JAKE GRANT; ILLUSTRATION: ALAN ELDRIDGE

THE MAIN EVENT

This must have been a rollercoaster year for the Emirati royal family, ultimate owners of the Yas Marina circuit; they pay a pretty penny for hosting the final round of the season and, in the early races, this was shaping up to be another dead rubber. Perhaps the internet conspiracy theorists have got it all wrong and it's actually they rather than [insert lunatic theory here] who have been blatantly sabotaging Max Verstappen's car since Miami. The second half of this year has been shaping up nicely towards a first down-to-the-wire season since 2021, controversial outcome of that race notwithstanding.

Despite a number of tweaks to this circuit, the racing remains relatively processional, largely since the long straights which were supposed to encourage overtaking just set up DRS trains.

2023 RACE RECAP

Max Verstappen qualified his Red Bull on pole from Ferrari's Charles Leclerc and then rebuffed a stiff challenge from Leclerc into the first corner. Thereafter he gently pulled out a gap, managing the race exquisitely all the way to the flag to claim his record-breaking 19th win of the season. Leclerc didn't have the pace to challenge for the lead but had enough in hand to stay ahead of third-placed George Russell's Mercedes.

The battle for fourth between Lando Norris and Sergio Pérez was resolved when Checo intemperately banged wheels and earned himself a penalty – which rendered Leclerc's late-race efforts to back Russell into him moot.

KEY CORNER: TURN 6

Desperation often strikes here at the end of the long back straight, where an ill-advised attempt to overtake can result in an uncomfortable ride over the run-off area.



RACE DATA

Venue Yas Marina**First GP** 2009**Number of laps** 58**Circuit length** 3.281 miles**Race distance** 190.253 miles**Lap record** 1m26.103s

Max Verstappen (2021)

F1 races held 15**Winners from pole** 10**Pirelli compounds** C3, C4, C5

CAR PERFORMANCE

Downforce level Medium**Cooling requirement** Medium**Full throttle** 60%**Top speed** 208mph**Average speed** 124mph

TIMETABLE (UK TIME)

Friday 6 December**Practice 1** 09:30-10:30**Practice 2** 13:00-14:00**Saturday** 7 December**Practice 3** 10:30-11:30**Qualifying** 14:00-15:00**Sunday** 8 December**Race** 13.00**Live coverage** Sky Sports F1**Highlights** Channel 4

THE PAST FIVE WINNERS HERE



2023

Max
Verstappen
Red Bull

2022

Max
Verstappen
Red Bull

2021

Max
Verstappen
Red Bull

2020

Max
Verstappen
Red Bull

2019

Lewis
Hamilton
Mercedes

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F1 UPGRADES

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THE TRILLION DOLLAR CONMAN

Author Ben Robinson

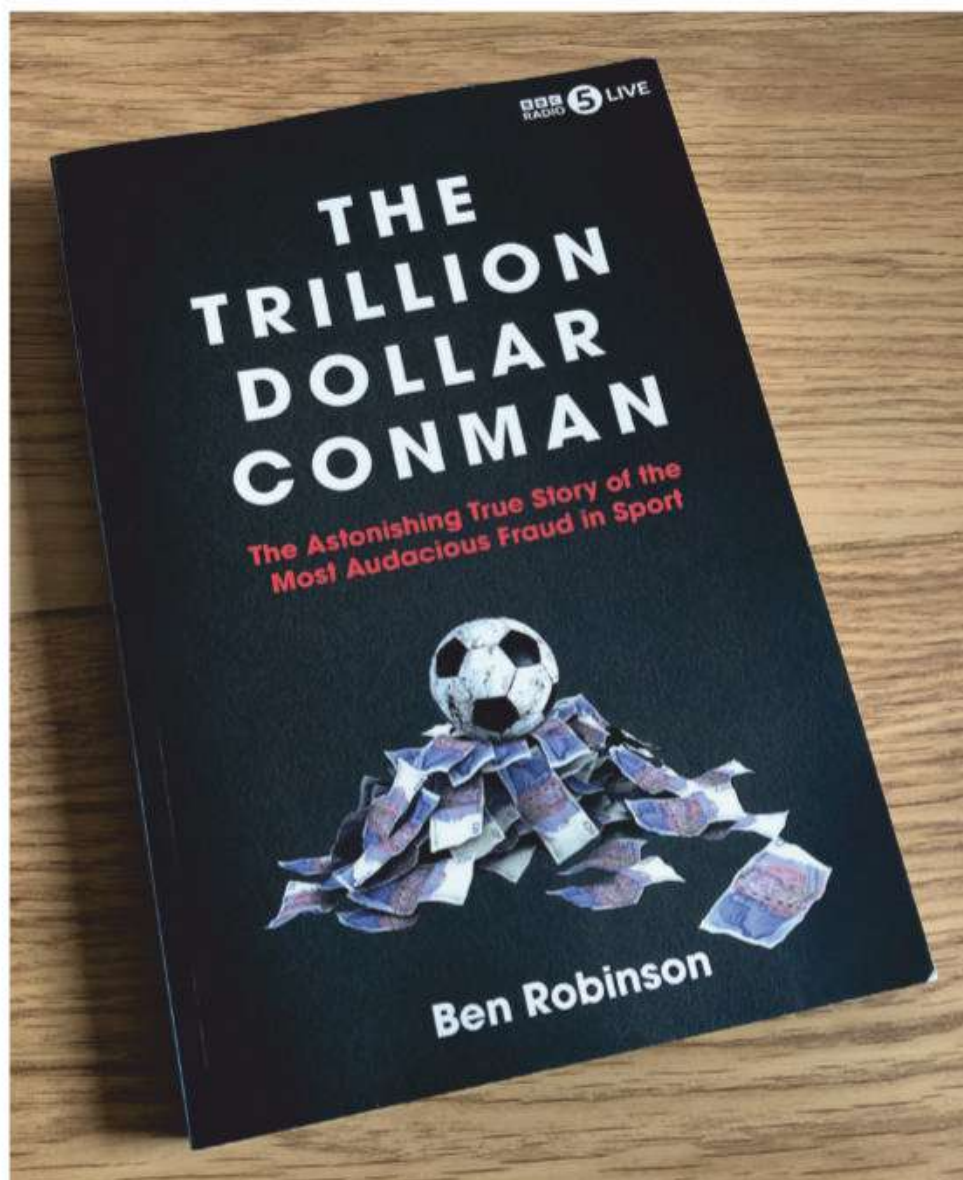
Price £20

iconbooks.com

Once upon a time there was a very naughty man named Russell King. In 2002 he arrived in F1 on the coat tails of Jenson Button's new manager, John Byfield. What nobody in F1 knew at the time was King had already 'done time' for fraud. And he would do so again. His empty promises alienated many in the paddock; his role in putting Button in a position where he had to buy himself out of a contract with Williams is nebulous

but he was behind an attempt to buy Jordan with fictitious funds.

When revealed as the figure behind the obscure 'Qadbak' group trying to buy Sauber-BMW in 2009, the alarm bells went off. They hadn't in football, though: King had got his hands on Notts County FC for £1. While football is the main focus of this diligently researched book, there are plenty of details about the grubby King's attempts to inveigle his way into F1.



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550 Spyder. Herrmann finished third overall; four months earlier he had been part of Mercedes' three-car return to grand prix racing at Reims, only to retire with engine failure.

The silver, yellow and black colour scheme is a lively reference to the original Porsche's colour scheme and the watch also features an engraved 'Spyder' on the side.

Within, the TH20-09 in house tourbillon movement offers a 65-hour power reserve.





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GEAR UP

HOW TO READ F1

Author Jenny Gow

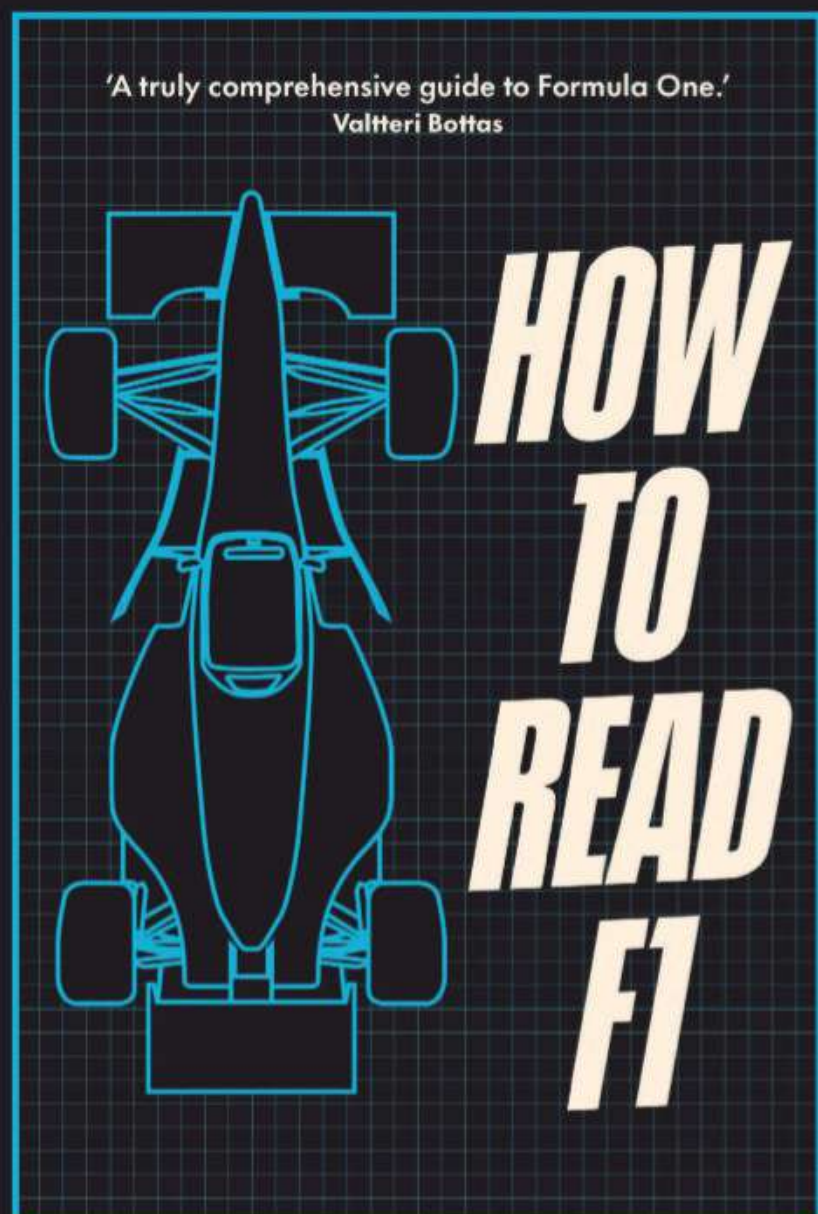
Price £16.99

penguin.com

If you follow **Formula 1** on Radio 5 Live or watch a certain Netflix show loosely based on F1 then you'll be familiar with Jennie Gow. She's now back in the paddock more regularly after suffering a major stroke two years ago.

As part of her rehab Jennie wrote this book, an A-Z of Formula 1 which begins at 'Aero' and proceeds from there. Covering the key concepts

and personalities of top-level motor racing, with a focus on present and recent history, it combines facts and anecdotes in an entertaining fashion. New fans are the key target audience for this work, which offers more depth and detail than *Drive to Survive* without becoming bogged down in minutiae such as the colour of Juan Manuel Fangio's sweater when he arrived at the Nürburgring in 1957.



JENNIE GOW
AS SEEN ON DRIVE TO SURVIVE



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If you, like us, have tried and failed to catch a glimpse of the sundry manifestations of the Aurora Borealis in the UK this year, you could be forgiven for thinking one of Orient Star's new limited-edition timepieces is a wind-up (so to speak). The M34 F7 Semi Skeleton Aurora and M34 F7 Mechanical Moon Phase Aurora, each limited to 200 pieces, feature white mother-of-pearl dials which shimmer with the aim of "depicting the aurora's

ephemeral light in the dawn sky". So you need neither engage in nocturnal habits nor fiddle with your phone's camera settings to see the effect.

As with other semi-skeleton Orient Star models, the inner workings are partially visible through the case back. Both are powered by in-house calibres F7M65 and F7F44 which promise a power reserve of 50 hours. The stainless steel cases are water-resistant to 100m.



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FINISHING STRAIGHT

THE FINAL LAP

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FLAT
CHATFULL THROTTLE
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AND DON'T
BREAK THINGS

The Silverstone mistakes, Oscar Piastri's Monza muscle, the Baku Q1 yellow flag misfortune. These moments did not cost Lando Norris his long-shot 2024 Formula 1 world title.

This is mathematically still on, though Max Verstappen's brilliant drive to win the São Paulo Grand Prix from 17th on the grid when Norris had started from and lost another pole has made the prospect more remote. But the fact is the real damage was done in the first five rounds, where the MCL38's early long-corner weakness and lack of DRS efficiency set up a 52-point deficit Norris has been trying to claw back ever since.

Max is just too good to let such an advantage slip, even when his formerly dominant squad was crumbling around him.

Heading to the bright lights of Las Vegas next week, Norris's McLaren squad is, however, on course to win a first constructors' title since

is without Adrian Newey to help deploy the extra aerodynamic testing time that comes with being second of F1's losers these days.

Just around the corner, the 2025 season is already hoped to be a title fight for the ages. 2024 has been surprisingly excellent – you wouldn't have put money on it being such a thriller after five rounds – and that's because McLaren isn't the only team to have pivoted back to competitiveness.

This feeling of optimism isn't a manifestation of hot-take culture. It's come through Ferrari's Monza, Austin and Mexico victories, with the knowledge that Lewis Hamilton is soon on board at the Scuderia to partner the ever-exciting Charles Leclerc. Verstappen, meanwhile, will be out seeking yet more glory while battling foes both real and (in the case of the evil, omnipotent British media bias) imaginary.

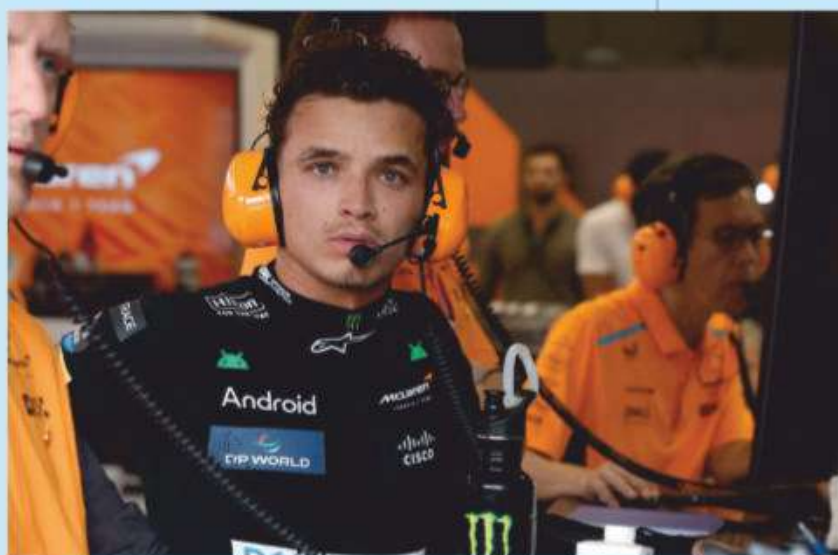
And then there's McLaren's chances of doubling up. In terms of car development, it is now a leader – having been the only frontrunning team to avoid tripping up through performance upgrades this term. The awkwardness of the position-swap late in the Brazil sprint race highlighted how some strategy calls surely still need sharpening at

the orange team, but that's a factor of having to keep Oscar Piastri and his management happy. Maybe McLaren won't need to if he instead leads from the off next year, having impressed so much during just two seasons on the F1 grid.

Norris will be aiming to join a long list of sporting success stories where disappointment came first. How Usain Bolt underwhelmed on

his Olympics bow in Athens in 2004. Or how New Zealand rugby union star Dan Carter only played in a World Cup final aged 33 – to borrow some examples from the mind of current England fly-half Marcus Smith.

Lando has improved this year – think seven poles and sensationally dominant wins at Zandvoort and Singapore, after his Miami breakthrough. But if more lessons of English rugby might be taken onboard within the mere 10-mile gap between the Bagshot training ground and McLaren's Woking HQ, close losses just can't be allowed to pile up or they may never be passed.



Norris must move on from the near misses if he is to savour success after the challenges of 2024

1998. Although this prediction comes with the large caveat of Ferrari's late surge and Red Bull getting a grip on the RB20 again. But around this potentially glittering point two things are certain.

What a turnaround and achievement it is for Zak Brown, Andrea Stella and the team to be in a position to claim the constructors' championship. And no wonder that even those said to have kept Sergio Pérez around at Red Bull out of misplaced loyalty are understood to have finally reached exasperation-ville. After all, Red Bull is now staring at a \$20million hole in prize money – and



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The Streamliner

by H. Moser & Cie.

Redefining the essence of minimalism and understatement, the Streamliner Small Seconds embodies the ultimate fusion of tradition and innovation. Combining steel and Grand Feu enamel with the latest cutting-edge in-house calibre – a self-winding micro-rotor marvel – it epitomizes timeless design.

Where time meets pure elegance.

RICHARD MILLE



RM 65-01 McLaren W1

Skeletonised automatic winding calibre
60-hour power reserve ($\pm 10\%$)
Baseplate and bridges in grade 5 titanium
Split-seconds chronograph
Function selector and rapid winding mechanism
Case in Carbon TPT® and titanium
Limited edition

A Racing Machine On The Wrist